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THE

Canadian Practitioner

(Formerly THE CANADIAN JOURNAL OF MEDICAL SCIENCE.)

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

EDITOR:

A. H. WRIGHT, B.A., M.D. TORONTO, M.R.C.S. ENGLAND.

VOLUME XV.

JANUARY, 1890, TO DECEMBER, 1890.

TORONTO:

THE J. E. BRYANT CO. (LTD.), PUBLISHERS, 58 BAY STREET.

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THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, JANUARY 1, 1890.

Original Communications.

MULTIPLE NEURITIS FROM ARSENICAL POISONING.

BY A. M'PHEDRAN, M.B.

Lecturer in Clinical Medicine, University of Toronto.

Thos. S., æt 58; followed no special occupation; personal and family history good.

In April, 1889, a tumor appeared behind the ramus of the jaw on the left side. It grew rapidly, and early in May was as large as a hen's egg. He consulted a so-called "cancer doctor," who applied a plaster, leaving it on for two days, and then a poultice for two more, and so on for about two weeks. These applications, the plaster especially, caused great pain. Before the end of the two weeks' treatment he found his legs becoming stiff and numb, with painful sensations shooting through them. In a few days he was unable to walk. The hands became affected also, and he could make little use of them, soon becoming unable to feed himself on account of the numbness and weakness, as well as of some inco-ordination in them.

He entered the Toronto General Hospital under my care June 29th, 1889. The legs were then almost completely paralyzed, the muscles being wasted and soft. He complained of great pain in the legs and feet, especially at night, an opiate being necessary to secure sleep. Anæsthesia in them was very marked, but they were acutely sensitive to painful impressions as, *e.g.*, drawing the finger nail along the sole of the foot, or pinching the muscles of the calf. Cold was easily perceived, but heat was not felt except when great, and then gave the sensation of cold. Kneejerk and other muscle reflexes were absent; likewise superficial reflexes. With the eyes closed he was not conscious of the position of the legs. To the faradic current there was no response in the feet or legs, and only a weak contraction in the thighs; none also in forearms and hands. There was no wasting of forearms and hands, but much anæsthesia and weakness with some inco-ordination. He could not pick up small objects without looking to see if he had hold of them. The skin everywhere was dry and showed a tendency to desquamate; the soles of the feet were scaling very freely. He said he had had no rash. The legs were deeply pigmented. There were no bladder or bowel symptoms. Appetite and general nutrition were fair. On the left side of the neck below the ear was a circular slough 1½ inches in diameter; it was beginning to separate.

He was given ℥ss daily of potassium iodide, and the bowels kept open by salines.

He slowly improved, and was able to stand alone by September. He is now able to walk a little, but, chiefly on account of the anæsthesia, he still needs the aid of his eyes to enable him to maintain his equilibrium. The calf-muscles have lost their atrophied appearance and become quite large and firm. He can now easily tell the position of the legs. The extensor muscles are still weak, and there is therefore a

feeling of shortening of the tendon-Achilles—he says himself that "it feels as if it should be let out a hole or two."

The anæsthesia of the hands persists, and he cannot pick up small objects without looking at them. Reflexes are still absent.

There is no room for doubt as to the nature of this case; still it is to be regretted that the urine was not examined for the presence of arsenic. The condition of the nerves in paralysis from arsenical poisoning has not as yet been ascertained by post-mortem examination, but there cannot be a reasonable doubt of a multiple peripheral neuritis, and that on this the symptoms depend. A cord lesion could scarcely cause such widely distributed symptoms without leaving permanent effects in some parts, nor would it likely give rise to such marked sensory symptoms. Then other toxic agents, causing similar phenomena, do so by setting up inflammation of the peripheral parts of the nerves. Alcoholic palsy closely resembles this case, and is to be distinguished only by the absence of the history of intemperance. Exposure and chilling occasionally cause very marked peripheral neuritis, but there is no history of such a cause in this man's case. The palsy produced by lead and mercurial poisoning is accompanied by such distinctive features that further remarks are not called for.

Peripheral neuritis may result from chronic poisoning by small doses, or from acute poisoning. It has developed in five or six days from the acute poisoning; in others again there were no signs for three or four weeks after the poisoning. The medicinal use of arsenic has never been followed by such severe symptoms, but not a few cases of herpes zoster, especially of the trunk, have been observed by Jonathan Hutchinson and Gowers, due to the medicinal use of arsenic. A case came under my own notice last summer in which a copious purpuric rash, especially on the feet and legs, was probably due to the free use of Fowlers' solution. It quickly disappeared on stopping the arsenic.

84 COLLEGE STREET.

We desire to direct attention to an advertisement showing that the office and residence of the late Dr. Yeomans, Mount Forest, are for sale.

BISMUTH SUBIODIDE IN THE TREATMENT OF ULCERS.

BY CHAS. T. NOECKER, M.B., TOR. UNIV., WATERLOO

Since the publication in the June number (1887) of THE CANADIAN PRACTITIONER of Dr. Sweetnam's article on the preparation of bismuth subiodide, I have used this drug more or less extensively in the treatment of ulcers and wounds. The results were generally so gratifying, and occasionally so *eclatant*, that I have become quite enthusiastic over its therapeutic qualities, and, with the gentleman who brought the drug under our immediate notice, wish to induce others to give this remedy a trial. While the remarks of enthusiasts should perhaps generally be accepted *cum grano salis*, still in the present instance I fully believe that the anticipations of those unacquainted with the properties of this dressing will be more than realized.

The cases of ulceration to which these remarks more particularly refer, may be divided into those characterized by (1) want of action; (2) over-action.

Those ulcers characterized by some peculiarity of action, *e.g.*, the syphilitic, rodent, etc., do not come under observation sufficiently often to enable me to report the results of treatment by means of bismuth subiodide. As all are acquainted with the appearances and usual situation of the typical indolent ulcer a description is superfluous.

My method of procedure is as follows: To order rest if possible in the recumbent position, elevation to relieve passive congestion, and poultices to soften the hard thickened margins, and favor the formation of granulations. After the expiration of 3 or 4 days the ulcer has likely assumed a more pleasing appearance, granulations may have begun to crop up, epidermis may have proliferated considerably. Bismuth subiodide is now dusted rather freely over the broken surface, a dressing of medicated cotton or gauze superimposed, and finally a bandage snugly applied. About the third day the dressing is changed. Considerable secretion may have collected, this is, however, I think, no objection, as the hardened tissues have thus been bathed, as it were, in an antiseptic solution.

After washing by means of an aqueous solution of carbolic acid, the dressing is applied as before, re-applied as often as necessary until cicatrization, usually rapid, is complete. Patients are advised, especially when varicosity exists or threatens, never to go about without the support of a bandage or an elastic stocking.

The results from the use of bismuth subiodide in the case of Mrs. M., æt. 50, emphasized the advantages over all ordinary dressings. This lady's left lower limb, disfigured by five ulcers, in size varying from a twenty-five to a fifty cent piece, was so enlarged and cumbersome, that walking was rarely attempted. As several medical men had exhausted their means, to no effect, the prospects were not particularly bright. However, after the preparatory treatment outlined above, bismuth subiodide broke the monotony of failures, and effected a cure in four weeks. This was looked upon as a marvellously short time in which to bring about a cure, for a year or more had previously been expended in attempts to close the gaps. As cicatrization was progressing the œdema gradually subsided, so that, at the end of the month, the patient was quite comfortable and able to go about.

Mrs. O., æt. 65, presented an ulcer the size of a twenty-five cent piece midway between knee and ankle. This patient was crippled by arthritis deformans, and suffered at this time with an ulcer of the cornea. The complication of ulcers corneæ indicated a disordered nutrition in a patient whose tissues generally were flabby and pale. As the ulcer was but of several months standing, with margins and surrounding tissues not yet in that thickened callous condition so frequently seen in ulcers of long standing, the effect of bismuth subiodide on the apparently dormant epithelial cells was awaited with considerable interest. When the dressing was removed on the third day the *solution of continuity* was no longer apparent. A covering of epidermis met the eye, a cover thin indeed, but still entire. Incidentally I may remark that about a week after this fortunate result I was hurriedly summoned to find her speechless and paralyzed along the right side. After the lapse of a week, patient regained almost complete control over the muscles that had been so suddenly disabled. Whether arrest of discharge from a chronic sore should be considered an etiological factor in the production of apoplexy, or whether the supervention of apoplexy should be regarded in all such cases as merely coincidental, I would not say positively, though I incline to the latter view.

Where pain is a prominent symptom, not uncommon in ulcers situated over the malleoli, bismuth subiodide appears to act as a sedative of considerable value. The pain may, and not infrequently does, subside before healing can be said to have begun.

Ulcers characterized by over-action can best be treated by means of a caustic, as the chloride of zinc or nitrate of silver, and after separation of the slough, by applying the bismuth subiodide. Thus far the good points of bismuth subiodide have been set forth. Occasionally a failure has to be recorded, failure due perhaps more to inattention to details on the part of patients than to a want of control by the drug over the healing process. It is surprising, indeed to be regretted, that patients place so small an estimate on the value of rest in the treatment of sores.

While iodoform and a host of other drugs have their admirers and advocates, I feel confident that bismuth subiodide will stand well to the fore when a comparison is instituted; confident also that medical men, after better acquaintance with this and other new drugs, will realize that with the progress of time and of scientific researches, additions are being made to our armamentarium: additions of such value as to warrant the belief and hope that even medicine is destined to rank among the exact sciences, if not in the near future, at any rate long before that state of perfection A.D. 2000.

Selections.

THE ABUSE OF UTERINE TREATMENT THROUGH MISTAKEN DIAGNOSIS.

BY WILLIAM GOODELL, M.D.,

Professor of Gynæcology in the University of Pennsylvania.

While the treatment of uterine diseases received a great impulse from the writings of Simpson in England, of Kiwisch and Scanzoni in Germany, and of Huguier and Recamier in France, it is to Bennet that we chiefly owe the common use of local applications and the popularization of the speculum. The former gyne-

cologists wrote about the more strictly surgical diseases of women, which were, and will ever be, relegated to specialists. But Bennet as early as 1843 in French, and 1845 in English, published his work on *Inflammation of the Uterus*, of which the last edition was issued in 1861. In it he contended that inflammation of the cervical canal is the main factor in female diseases; that from it come ulceration, displacement, leucorrhœa, menstrual derangement, and ovarian disorder; and that the inflammation, being limited to the cervical canal, can readily be dislodged by strong caustics. Written with dogmatic zeal, advising a definite treatment to a reachable and a seeable object—a treatment which the humblest yeoman of the profession could carry out—few books of modern times have exerted so great and so widespread an influence. That riddle of the Sphinx—the cause of woman's ill-health—had been read and interpreted! The profession was taken fairly by storm; the effect was as electric as the appeal of Maria Theresa to Hungarian nobles. From Arctic to Antarctic oceans, from the Mississippi to the Volga, countless speculums of varied form leaped from their bags and flashed in sunlight boreal, tropical, and meridional. Cauteries actual or potential, applied to actual or potential uterine sores, became the order, in fact, the ruling passion of the day. In the general enthusiasm it was soon forgotten that every mucous membrane secretes, and that it must of course give evidence of its own secretion, just as every nose contains its mucus. Hence, every examined womb, being found to contain mucus, was, as it were, invalided—that is to say, it was put on the speculum list. Naturally, then, not a womb being found healthy from the speculum standpoint, this much-abused organ was charged with being the cause of almost all the ills that female flesh is heir to, and it was treated—that is to say, maltreated—for every imaginable disorder that could not be referred off-hand to some other organ. Bennet, the medical Frankenstein, had evoked a monster which could not be curbed, and for five and thirty years the speculum ran riot.

But in this age of unrestful progress, at every turn of the hour-glass of time, some cherished creed, some accepted dogma, is proved a heresy, and Bennet's cervical theory fared but little better. A wholesome reaction set in. As experience grew, it was found that pelvic inflammations and strictures of the cervical canal came from this treatment. This discovery led to the abandonment of the more heroic caustics. Then, again, it gradually dawned upon truth-seekers that far more than inflammation, passive congestion of the womb and of its annexes, together with resulting structural changes, that uterine displacements and injuries, and that ovarian and tubal lesions played important *rôles* in the female economy. In keeping with this knowledge is the far more rational and beneficial treatment of the present day.

Still, granting that the treatment of actual, visible, and tangible uterine disease leaves little for improvement, the whole truth has not been reached—for truth evolves slowly and does not, like Aaron's rod, bud and blossom in a night. The ball-and-chain of tradition still drags at the heel of this branch of science, and the medical mind, in close touch here with the lay mind, tends to give the reproductive organs undue importance—to attribute, in fact, altogether too much to their influence. By a very large number of practitioners, even by specialists working in other fields of medicine, these organs are too often wrongfully made a scapegoat for headaches and nape-aches, for spine-aches and back-aches, for weakness of vision, for aural disturbances, for sore-throat and weak lungs, for irritable heart, and also for a host of so-called uterine symptoms. Yet these very symptoms may be due wholly to nerve-exhaustion, or malnutrition of nerve-centres, and not to reflex action, or to direct action, from some real or some supposed uterine disorder. I say this advisedly, because I too have thus erred, and because hardly a day passes without my seeing cases of supposed uterine disease which have been so treated for months—even for years—when the whole trouble, or the most of it, lies—not in the reproductive organs, but—in the nerve-ganglia. This abuse of uterine treatment, through a mistaken diagnosis, is, in my opinion, the great medical error of the day.

Once I was asked by a medical friend to see an exceedingly bad and acute case of pruritus vulvæ. Very naturally attributing it to uterine disease, he discovered a small cervical tear, and I was called to decide the question of repairing

it. I, too, was, at first led astray, but the suddenness of the seizure and the lack of consistency in the behavior of the symptoms, put me on my guard, and we soon found out the cause to be an acute attack of jealousy.

To this day a lady rallies me upon a wild-goose chase which I made after a uterine cause for her neurasthenic symptoms. Carefully overhauling her pelvic organs I discovered nothing but a torn perineum, and attributing to that lesion all her ills, which were legion, I restored it, making at the same time the rash but honest promise of her complete restoration to health. The rent was a bad one and needed repair, but it had existed for years without doing harm, and it had nothing to do with her symptoms, although they were largely uterine in expression, notably a bearing-down feeling. They became, in fact, worse after the operation than before, and it was only after recognizing the nerve element of her disease, that I was enabled to do her any good. Many such mistakes, of attributing too much to the reproductive apparatus, have I seen in the practice of other physicians; but my own blunders in the same direction have made me feel very charitable toward them. Out of many examples let me give a few:

Not many years ago I was asked by one of our best and most conscientious physicians, himself a gynecologist and a medical teacher, to see a very delicate and refined lady. She had passed through most of the trials which beset a clergyman's wife, and had borne two children, the younger one ten years before. Having for many years enjoyed fairly good health, she lately had suffered a great bereavement, and she was now prostrated by nerve-exhaustion. Her symptoms were markedly of a uterine character. These were pain in the back, an irritable bladder, a pelvic bearing-down, an inability to walk, aches in the left groin, menorrhagia and leucorrhœa. These uterine symptoms had led my friend astray, and finding an insignificant cervical tear, he attributed to it all his patient's ill-health, and, against my advice, operated upon it. The wound healed perfectly, excepting in one suture track on one side of the cervix, where a small fistula remained. His patient becoming none the better, and rather the worse, he laid the blame on this fistula, and tried to close it. Not succeeding, he again called me in. Now, this small fistula had no more to do with the lady's general ill-health than the earring holes in her ears, and her disease was clearly a neurosis. Yet I could not bring my friend to my way of thinking—the uterine symptoms were too much for him, and he tinkered away at the fistula until it finally healed up, but the lady became no better. Finally, he adopted my theory of neurosis, put his patient upon an appropriate treatment, cured her, and then had the manliness to thank me for my advice. My friend is now, alas! no more, else I would not have told this story; and I have done so simply to show how hard it is for a bright and progressive mind, even for a gynecologist and a medical teacher at that, to free himself from the bias of tradition.

By breaking down the nervous system, the brain-cramming, the intellectual rivalry, the buckram proprieties, and the unwholesome confinement of our boarding-schools and public schools, breed a host of sickly girls, who swarm in every class of society. Manifold diseases, both functional and structural, date from the recitation room. They are mostly of a uterine complexion, for at that time of life the sexual sphere dominates, and the brunt of the nervous and of the vascular disturbances which form the essence of nerve-exhaustion, falls on the most exacting organs—the reproductive. Hence these suffer from neuralgic pains or from congestion and the lesions coming from prolonged congestion. Yet physicians, misled by the urgency and the number of the so-called uterine symptoms, mistake the effect, or more often the counterfeited effect, for the cause, and give a local treatment when it should be a constitutional one.

So common is it for girls in boarding-schools to suffer either from amenorrhœa or from irregular menstruation, as to create a general impression in the community that in these schools some drug is secretly given in the food in order to lessen the laundry work. In one school of great repute so many girls missed their monthly periods that the family physician of several of them wrote to me, asking whether it were possible, as his patients averred, "that as their clothes were laundried in the building, something was given in their food or their drink to

produce the effect, for the purpose of saving the laundress the disagreeable task of washing the napkins." My reply was, that if laundresses were acquainted with a drug that could arrest menstruation, they knew more than the profession; and that his patients had lost their monthly periods, not from secret drugs, but from loss of health due to an unwholesome system of education.

Another physician, the worthy chairman of a school-board in a young city, became awakened to the fact that a great proportion of the girls in the public schools were failing in health from backache, wakefulness, weariness, and disordered menstruation. Full of philanthropic and architectural zeal, and with the uterine idea firmly implanted in his head, he wrote to me, asking whether the long flights of stairs in the school-houses were not to blame for these female ailments. I replied in words to the effect that were a higher culture literal, being perched upon the top of some Eiffel's tower, like Simeon Stylites upon his pillar, and were girls obliged to climb up to it, the muscular effort would no doubt put them out of breath, and repeated intellectual excursions in the same direction might in the end cause—not uterine diseases, but—the heart diseases of athletes and of Alpine climbers. I further contended that stair-climbing *per se* could rarely produce uterine disorders, and that the girls in his school were suffering—not from uterine disease, but—from the nerve-counterfeits of uterine disease, viz., from the relaxes of a nerve-exhaustion resulting from an unhealthy, and therefore faulty, system of education. My arguments evidently failed to convince this honest gentleman, for the correspondence abruptly ended at this point, and I have a shrewd suspicion that he carried out his architectural plans. Should any of my readers journey westward, and see in some growing city a girl's school-house fashioned like a covered rope-walk or a skating-rink, depend upon it, it will turn out to be the philanthropic but mistaken evolution of my correspondent. The traveller would no doubt find education very effectively taught on the only floor—the ground floor—of this building; but doubtless, also, he would see as many pale faces, and would discover on inquiry no fewer backaches, spine-aches, womb-aches, and menstrual disturbances, than when the recitation rooms were on the third or the fourth floor.

In a parous neurasthenic woman, a leucorrhæa, a slight prolapse of the womb, a small tear of the cervix, or an insignificant rent of the perineum, each plays the part of the will-o'-the-wisp to allure the physician away from the bottom factor. To these trifling lesions—because they are visible, palpable, and ponderable, and because he has, by education and by tradition, a uterine bias—he attributes all his patient's troubles; whereas a greater and a subtler force, the invisible, impalpable, and imponderable nervous system, may be the sole delinquent. She may be a bereaved mother, a grieving widow, or a neglected wife, and all her uterine symptoms, yes, every one of them, may be the outcome of her sorrows, and not of her local lesions.

Often the victim of this misdirected treatment is a young unmarried girl, whose nerves have been upset by some secret grief, perhaps a cross in love, or by ambitious over-study. Misleading symptoms now set in, which I cannot better describe than by a quotation from one of my own articles on the subject (*Lessons in Gynecology*, third edition, p. 523):

"She looses her appetite, lies awake at night, and grows pale and weak. She has cold feet and blue finger-nails, and perhaps complains of infra-mammary and ovarian pains. Headache and backache, spine-ache, and an oppressive sense of exhaustion distress her. Her monthly periods, hitherto without suffering, now begin to annoy her more and more, until they become extremely painful, and at these times dark circles appear under her eyes. Her linen is stained by a leucorrhœa, and bladder troubles soon set in. She is wearied beyond measure by the slightest mental or physical exertion; the short visit of a friend upsets her for the rest of the day; 'a grasshopper is a burden' to her, and she finally becomes very nervous or hysterical. Now, very unfortunately, the idea attached to this group of symptoms is that the womb is at fault. A moral rape is, therefore committed by a digital or a speculum examination, and two supposed lesions will be found—first, as a matter of course, the natural virginal anteflexion; and, secondly, a slight uterine catarrh. These are at once seized upon as the prime factors,

and she is accordingly subjected to a painful, an unnerving, and a humiliating treatment for the false flexion and the sham endometritis. Unimproved, she drags herself from one consulting-room to another, until finally, in despair, she settles down to a sofa in a darkened room, and becomes either the spoiled pet or the vampire of the family."

That this is not an over-wrought picture, every one of my readers will attest. For what physician has not had the original as a patient, and cursed his stars for the possession?

At the present time there are in my private hospital seven ladies who are rapidly recovering from general nerve-exhaustion and from its sham uterine symptoms. They will get well without any local treatment whatever. Yet all were pronounced by their physicians to be cases of uterine disease, and had been so treated for months, and even for years, without benefit. One of them was urged by an excellent authority to submit to the removal of her ovaries; another, to have her slightly torn cervix sewn up; a third, to have a trifling rent in the perineum repaired. Whilst the fourth, a young girl whose nerves have given way from hard study, had a perfectly healthy and a perfectly poised womb, propped up by an anteflexion pessary, treated every other day, for weeks, by an application, and deluged twice a day with gallons of hot water.

Many of us have laughed at the quaint but kind doctor in one of Bulwer's novels, who prescribes a special pellet for each emotion, and calms a passion by its appropriate parvule. But are we, the physicians of the nineteenth century, a century of infinite progress, are we, I say, a whit the wiser? We who seek to cure the nerve-reflexes of grief, of love, of neglect and of jealousy, not by harmless infinitesimals, but by the removal of the ovaries, and by operations upon the cervix and the perineum; or try to salve brain-wounds and heart-pangs by anteflexion pesaries, by uterine applications and by vaginal douches of a temperature of 110°? Can the rankest materialism be pushed further than this?

Fortunately for the reputation of my professional brothers, and fortunately for my own—for I, the heavy Mentor of this homily, have also sinned and in like manner—this grave error of diagnosis is not without excuse. The symptoms of nerve-prostration so greatly resemble those of even coarse uterine lesions that the nerve-mimicries can very readily be mistaken for signals of actual organic disease. Nor, indeed, are they always distinguishable the one from the other, for the marvellous kinship between mind and matter is a tangled skein not yet unravelled by dead-house or by laboratory.

What, then, are these symptoms? Their name is legion, but the most common ones are, strangely enough, those which lay and professional tradition, with singular consent, have labelled as the symptoms *par excellence* of womb disease. They are, in the order of their frequency, great weariness, more or less of nervousness and of wakefulness; inability to walk any distance and a bearing-down feeling; headache, nape-ache and backache; cold feet, an irritable bladder, spinal tenderness and pain in one ovary, usually the left, or in both ovaries. The sense of exhaustion is a remarkable one: the woman is always tired, and she passes the day tired, she goes to bed tired, and she wakes up tired, often, indeed, more tired than when she fell asleep. She sighs a great deal, and her arms and legs tremble or "fall asleep" so frequently that she fears palsy or paralysis.

Other symptoms not quite so common are the cerebral ones: such as low spirits, bad dreams, nightmares and night-terrors; explosive sounds in the head, a loss of memory, suicidal thoughts, the fear of impending insanity, the dread of being left alone or of being in a crowd. Some patients are unable to protrude the tongue, or they may have weakness of vision, or a morbid keenness of smell or of taste. Others are kept away from church on account of spinal thrills and locking of the jaws, whenever they hear the lower or the tremulous notes of the organ.

The uterine reflexes are: uterine, pelvic and ovarian aches; pendulum pains swinging from one groin to the other, jerking muscles which cannot keep still, a trembling or a quivering in the abdomen, or a feeling that it needs support, which is often given by pressure with the hands. The intestines display their interest in the general neurosis, by flatulence, by noisy borborygmi, and by the belching of wind in large volumes. They usually keep bound, but some-

times they are loose, or the two conditions alternate. One very common symptom is great exhaustion after a movement of the bowels, and these movements are often caused at unseasonable hours by any simple excitement, such as the ring of the door-bell or the call of a friend.

Dyspeptic symptoms are rarely absent, sometimes they are very marked, while the tongue looks perfectly clean, even when nausea, vomiting, or diarrhœa are present.

Some nervous women are annoyed by clammy hands and feet, or by profuse sweats, which often are not general, but either local or unilateral. Thus I have seen one-half of the face always wet, while the other half kept dry. One of my patients perspired so profusely from the tips of her fingers, that they were constantly dripping and she could not wear gloves. Once I saw a hysterical nose distilling a clear serum, which for weeks dribbled away, almost in a stream. The annoyance was great, yet no treatment whatever did the slightest good; but one day it vanished as mysteriously as it came. Many nervous women are frightened by muscular cramps, or by tinglings, by loss of sensation, or by numbness in the extremities, which are deemed the precursors of paralysis. Nor does the skin escape the general sympathy. It becomes dry, harsh and scurfy, and pigmentary deposits appear under the eyes, around the nipples, and on the chin and forehead. Blondes are likely to get a mottled complexion, and brunettes may become disfigured by brown patches. Sometimes the whole complexion changes to a darker hue. In one instance this was so marked, that both the family physician and the consultant diagnosticated a case of nerve-bronzing to be one of Addison's disease.

Another very remarkable, and often very misleading, symptom is an aneurismal pulsation of the aorta in the epigastrium. Repeatedly have patients been sent to me with the diagnosis of aortic aneurism, when their sole disease was nerve-exhaustion. Lastly, abnormalities in the sexual feeling are not wanting. In the majority, all desire is quenched, or intercourse is painful; in some the sexual feeling is increased; in yet others, it is urgent, but it cannot be gratified; in a few, the dreams are erotic.

From this wealth, from this positive exuberance of symptoms, one would suppose that the diagnosis could not offer any difficulty whatever; but this is far from being the case. The laws governing woman's complex organism cannot be codified; nor can we correctly label the lesions of cerebration proper or of innervation in general. Then the instinct of causality in man leads him to forget that things seen may come from things unseen, and to attribute preferably to the seeable and to the touchable like phenomena, which may come from the unseeable and the untouchable. Naturally, then, we are likely to be misled: First, by symptoms which by common consent are deemed peculiar to uterine disease, secondly, by the co-existence of actual uterine disease, to which we attach undue and overshadowing importance. Apart from these reasons there is yet another one: the human mind, bewildered by a multiplicity of details, does not catch the meaning of their aggregate. So Goethe's traveller missed the forest by reason of the wilderness of trees around him, and the hero of our own national caricature "could not see the town, there were so many houses."

From a large experience I humbly offer to the reader the following watch-words as broad helps to diagnosis. In the first place, always bear in mind what another has pithily said, that "woman has some organs outside of the pelvis." *Secondly.* Each neurotic case will usually have a tale of fret or grief, of cark and care, of wear and tear. *Thirdly.* Scant or delayed or suppressed menstruation is far more frequently the result of nerve-exhaustion than of uterine disease. *Fourthly.* Anteflexion *per se* is not a pathological condition. It is so when associated with sterility or with painful menstruation, and only then does it need treatment. *Fifthly.* An irritable bladder is more often a nerve symptom than a uterine one. *Sixthly.* In a large number of cases of supposed or of actual uterine disease which display marked gastric disturbance, if the tongue be clean, the essential disease will be found to be neurotic; and it must be treated so. *Seventhly.* Almost every supposed uterine case, characterized by excess of sensibility and by scantness of will-power, is essentially a neurosis. *Eightly.* In the vast majority of cases in which the

woman takes to her bed and stays there indefinitely, from some supposed uterine lesion, she is bed-ridden from her brain and not from her womb. I will go further, and assert that this will be the rule, even when the womb itself is displaced, or it is disordered by a disease or by a lesion that is not in itself exacting or dangerous to life. *Finally.* Uterine symptoms are not *always* present in cases of uterine disease. Nor when present, and even urgent, do they *necessarily* come from uterine disease, for they may be merely nerve-counterfeits of uterine disease.—*Med. News, Dec. 7th.*

FORCIBLE FLEXION OF THE BODY IN LOCOMOTOR ATAXY.

At the thirteenth Congress of the Italian Medical Association, recently held at Padua, Dr. P. Bonuzzi communicated the results of a number of experiments which he had made on the dead body with the view of ascertaining the physical effects produced on the spinal cord by suspension. These experiments led him to the following conclusions:

1. During suspension the spinal cord undergoes a marked change in its relations to the vertebral column, being displaced upwards to the extent of from three to four millimetres, this result being due to slight increase of the distance between the vertebræ owing to relaxation of the muscles and stretching of the vertebral ligaments.

2. The roots of the spinal nerves, with the exception of the cauda equina, do not seem to be appreciably stretched, although they are slightly altered in position.

3. The tension of the cerebro-spinal fluid is increased.

5. During suspension the vertebral column is apparently lengthened to the extent of from one and one-half to three centimetres, this elongation, however, being due more to separation of the spinous processes than of the bodies of the vertebræ. The body, as a whole, is lengthened to the extent of from two to three centimetres during suspension.

In a second series of experiments Dr. Bonuzzi proved (to his own satisfaction) that by bending the body forcibly forward, so as to bring the knees into contact with the abdomen, the spinal cord and the cauda equina are subjected to very considerable stretching. Having made an opening into the vertebral column and inserted a needle perpendicularly to the long axis of the cord, he noted that on bending the body forcibly forward the needle was carried downwards for a distance of from eight to twelve millimetres, the spinal cord itself becoming thinner and more resistent, and the cauda equina becoming extremely tense. Dr. Bonuzzi found that traction on the sciatic nerves stretched the cauda equina, but did not draw down the cord more than two millimetres. In forcible flexion the vertebral column undergoes an apparent lengthening of from six to fourteen centimetres. Dr. Bonuzzi also observed that as the body was bent forward a considerable amount of venous blood escaped from the opening into the vertebral canal, this result being due, according to him, to the pressure on the spinal veins caused by the forcible flexion of the body.

The inference drawn from these experiments by Dr. Bonuzzi is that by forcible flexion all the therapeutical advantages of suspension can be obtained without its drawbacks. He has as yet only once had the opportunity of trying this method on the living subject, but in that case the results were very encouraging. The patient was a woman, who had had all the characteristic symptoms of locomotor ataxy in a very marked degree for nine years. Flexion was applied in the following manner: The woman lay on her back, and the legs were drawn up, by means of a towel twisted loosely round the ankles, till the knees touched the abdomen; she was kept in this position at first for half a minute, and then for gradually lengthening periods up to three minutes. The treatment was applied on alternate days, forcible flexion being carried out two or three times on each occasion. After three sittings the lightning pains became less severe, and after eight sittings they almost entirely ceased. The power of locomotion was so far regained that the woman was able to carry a bucketful of water from room to room, a thing she had not been able to do for three years. She could also stand with her eyes shut for half a minute without falling. The irregularity of the pupils and the absence of knee-jerk remained as before. In other respects improvement was progressive and lasting.—*London Med. Recorder.*

VOMITING OF PREGNANCY TREATED WITH MENTHOL.—The most unpleasant symptom accompanying pregnancy is undoubtedly the vomiting which often occurs, and this is especially serious because our present knowledge of its therapy is most unsatisfactory, and, in many instances, the physician is at a loss to know how to proceed. It is not unfrequent that all therapeutic measures fail and relief is only obtainable by the induction of abortion. Guided by the fact that the trouble must be regarded as a reflex neurosis, and that, theoretically, drugs which would depress the reflex excitability should also act beneficially in this complication, Dr. Sigmund Gottschalk, of Berlin, has used menthol in this disorder with marked success. He employed a solution containing fifteen grains of menthol in five and a half fluid drachms of alcohol and five fluid ounces of distilled water. Of this he gave a tablespoonful hourly. In a case so treated, and reported in the *Berliner Klin. Wochenschrift*, October 7, 1889, the vomiting ceased after the third dose, although previously other remedies had been used unsuccessfully. The patient was able to retain food and subsequently made a rapid recovery. The drug was continued for three days, the dose being gradually decreased. The use of menthol is continually widening, and there seems to be good reasons on purely theoretical grounds for expecting that the results obtained by Dr. Sigmund were not in the 'nature of a coincidence, but that they indicate a rational addition to the therapeusis of the vomiting of pregnancy.—*Med. and Surg. Reporter.*

ADMINISTRATION OF ANÆSTHETICS.—At a neeting of the Brooklyn Surgical Society, June 6, 1889, Dr. Pilcher said: The experience of the past ten years has led me to give preference to that very popular and common inhaler known as the Allis inhaler. I am convinced that in a very considerable portion of cases the use of ether as an anæsthetic is dangerous, and have been rejoiced to see the tendency, which is so marked in the profession at present, to study the advantages and dangers of different anæsthetics with regard to different patients, and to suit to particular patients the anæsthetics which experience shows to be the best adapted for them; so that there is rapidly becoming less partizanship with regard to this or that anæsthetic. It is a marked feature for which I think all thoughtful surgeons should rejoice in the conditions of to-day. The long administration of ether is certainly depressing. Even the short administration of ether has a more or less irritating effect upon the respiratory passages. Ether to any considerable extent has also an irritating effect upon the urine secreting apparatus, and it is certainly wise for us to take these things into account in choosing our anæsthetic; and if for any reason we feel we must use ether as an anæsthetic, it seems especially wise that we should take advantage of some such device as this which has been presented to us this evening, which would diminish as much as possible the irritating effect of that particular anæsthetic. In many cases I am convinced that chloroform should be used as the anæsthetic rather than ether; in all cases where there is recognizable irritation of the bronchial and pulmonary tissues, also where there is a diseased condition of the urinary secretive apparatus; that in young children, likewise, who as a class have been shown by experience to be peculiarly pleasantly affected by chloroform, it should be used; and at the other extreme of life, in the aged, who as a class either already sufter from or are on the verge of renal or pulmonary degenerative changes. Now, as to the methods of administering chloroform: The most convenient and safe inhaler is always at command in a common tumbler or a common teacup, into the bottom of which a handkerchief can be put so that it shall be an inch or two away from the nostrils or mouth, and which when put over the mouth and nose, cannot be forced so close down upon the cheek upon either side that there will not always remain still considerable apertures at those points for the abundant admission of air with the chloroform vapor. This is nothing new, but I have had occasion so many times to suggest it to men of large experience and of age in the profession, whom I have seen attempting to administer chloroform in both wasteful and dangerous methods, that possibly it may not be out of place to notice this method in this connection.—*Brooklyn Medical Journal.*

Therapeutic Notes.

CARTER'S LITTLE LIVER PILLS.—Weight of twelve pills about 7½ grains, of which probably 2 to 2½ grains is sugar coating. They contain podophyllin and aloes, made into a pill and coated with sugar. On the above we deduce the following formulæ as closely resembling the original:

Podophyllin,	1½ grs.
Aloes, Socotrine,	3½ grs.
Mucilage of acacia,	q. s.

Mix, divide into twelve pills and coat with sugar.—*The New Idea.*

LOZENGES OF PYRETHRUM AND PILOCARPINE FOR RELIEF OF DRYNESS OF THE THROAT AND MOUTH.—I have used with much satisfaction for the relief of the uncomfortable sensations of heat and dryness which characterize many acute and chronic affections of the mucous membrane of the mouth and throat, a lozenge made according to the following formula:

Fluid extract of pyrethrum	2-3 minims.
Pilocarpine hydrochlorate	½ grain.
Pure extract of licorice	2 grains.
Powdered acacia	2 grains.
Glycerine	1 minim.
Sugar, enough to make	20 grains.

The lozenge is allowed to dissolve in the mouth, and one is used every two, three, or four hours, as may be indicated. Should more frequent use be necessary the quantity of pilocarpine should be reduced. The addition of two grains of ammonium chloride will often be beneficial in subacute inflammatory conditions of the mucous lining of the respiratory tract; while in more chronic affections, two or three minims of the oleoresin of cubebs will serve a good purpose. The lozenge has a pleasant pungency, and its effect in keeping the parts well moistened is quite marked. Speakers and singers have told me that the use of a lozenge just before lecture or performance has made it possible to do work comfortably which otherwise would have caused much pain and fatigue. It is possible that a little extract of coca might be advantageously added for special occasions of this nature.

The lozenges are skilfully prepared by Mr. Frank S. Morgan, of this city, and are dispensed by him under the name of *trochisci pyrethri et pilocarpinæ*. *Solomon Solis Cohen in Med. News.*

TREATMENT OF ACNE OF THE FACE.—The most rational treatment of facial acne should be based upon the following two principles: first, to allay the congestion of the skin as far as possible; second, to remove all causes which could give rise to hyperæmia of the face. To obtain these results, both internal and external remedies may be used. The direct care of the skin demands the principal attention. Every morning and evening the face should be washed with a fine sponge. The temperature of the water should be as high as the patient can possibly bear it. After washing, the skin should not be dried. Such a washing renders the skin extremely hyperæmic. As soon as the water begins to evaporate from the face, the superficial blood-vessels become contracted, and gradually regain their lost tone. In many cases this simple treatment will be all that is needed, and a speedy recovery will follow. In severer cases, however, the following solution may be employed:

℞.—Hydrarg. bichlor. corros.,
Ammon. muriat. aa gr. xv.
Emuls. amygdal. amar. f℥ vij.
M. et fiat lotio.
Sig. Apply morning and evening.

The following formula will be found to be of equal if not of greater efficacy:

℞.—Aquæ destil f℥jx.
Sulphur. sublim. f℥j.
Ætheris sulfuric f℥iij–f℥jv.
M. et fiat lotio.
Sig. Apply morning and evening.

The practitioner may, however, come across cases of such a stubborn nature that even these lotions will fail to effect a permanent cure. In such cases, the only remaining course of treatment is scarification. This procedure never fails to quickly relieve the congestion of the skin, and also causes the acne pustules to rapidly disappear. Regarding the best advisable diet to be pursued during the treatment of acne, little need be said, other than that highly spiced and heating foods should be avoided.—*Allg. Med. Central Zeitung. Med. and Surg. Reporter.*

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

When a change of address occurs please promptly notify the Publishers, THE J. E. BRYANT COMPANY (*Limited*), 58 *Bay Street.*

TORONTO, JANUARY 1, 1890.

ANNOUNCEMENT.

Beginning with the present number the editorial management of THE CANADIAN PRACTITIONER will be under the sole charge of Dr. A. H. Wright; Dr. Graham and Dr. Aikins retiring. It is but just to the retiring editors to say that the excellent standing which is now held by THE CANADIAN PRACTITIONER among the medical journals of this continent is largely due to their reputation as physicians, and their ability as editors. To Dr. Aikins especially should the thanks of all well-wishers of THE PRACTITIONER be extended, as his labors in behalf of the journal have been most unremitting and zealous.

PROSPECTIVE.

In entering upon the fifteenth year of our publication, it is fitting that we should say a few words as to what our aims are in conducting this magazine, and as to our hopes for the realization of these aims. We state frankly, that our aims are to make this magazine second to none on this continent for the promotion of medical science, for the improvement of the art of medicine, and for the elevation of the professional status of the medical practitioner.

THE PRACTITIONER will endeavor to view the great and broad field of medicine in all its aspects, but especially as a science and an art. The wonderful advances of medicine as a science were well shown in the addresses of the distinguished men who took part in the opening exercises of the new building of the Biological Department of the University of Toronto. The city of Toronto is highly favored at the present time in possessing an exceptionally good class of teachers in Chemistry, Anatomy, Biology and Pathology. We are happy to be able to announce that we shall receive the active and cordial assistance of a number of these men, men who are of undoubted ability in the various departments we have mentioned, and that our efforts to present to our readers what is best worth knowing in connection with the science of medicine will be seconded by these coadjutors in every way that lies in their power.

We have no desire, however, to see science cultivated at the expense of art. The scientific and practical should be combined. We will, therefore, try to avoid the fault of exalting the importance of diagnosis and pathology by depreciating that of treatment. With this end in view, special attention will be paid to the department of Practical Therapeutics. And again we have pleasure in announcing that a number of our most prominent physicians and surgeons, both in and out of Toronto, will contribute towards those of our columns which are devoted to practical medicine and surgery.

Arrangements, too, have been made by which we will give in every issue reports of interesting cases, from both hospital and private sources. We hope this will encourage our friends at a distance to send us brief notes or reports of cases of interest occurring in their practice. We will set apart as much space as we can spare for reports of various medical societies. Some of these reports will be very complete, as, for instance, those of the Pathological Society of Toronto, which, we are happy in saying, we have made arrangements to give very fully.

But in addition to purely medical literature, all matters of special interest to the profession will be considered. We will loyally support the Medical Council of Ontario in its efforts to suppress quackery and elevate the standard of medical education and of the medical profession in the Province. And we will assist the profession in their efforts to procure changes in some of the old-fashioned requirements of the Council's curriculum.

Our programme is full, our aims, as above described, are high, but our hopes are strong.

We desire to publish a medical journal which will be a credit to Canada and deserving of continental recognition. Our plan of operations is well organized. Our co-workers are possessed of high attainments and peculiar fitness. We believe we are justified in saying our success is assured.

THE OPENING OF THE UNIVERSITY BIOLOGICAL BUILDING.

The proceedings connected with the formal opening of the new building of the Biological Department of the University of Toronto, Dec. 19th and 20th, were in the highest degree interesting. The plan of inauguration and the methods of conducting the ceremonies were conceived by the Vice-Chancellor, whose wondrous zeal, endless energy, and rare discretion have done so much to place the Medical Faculty in its present high position. To Professor Ramsay Wright was entrusted the important duty of carrying out the programme. The results show that he was the man for the occasion. The medical Faculty and its friends have long felt that he was a tower of strength to the cause of higher medical education in Ontario. On the formal opening day of the improved Biological Department he demonstrated conclusively, not only that he had a grand building with magnificent appliances for the purposes of Biology, but also that he was second to none in the world as a teacher of this important subject.

We had on this important occasion from the United States the best quartette of medical Scientists that ever appeared before any Canadian audience. It was a matter of great interest that this quartette included *our own Osler*, who, on his merits, has obtained one of the highest positions in the medical world. We owe a debt to these distinguished visitors that we can never repay. Their addresses commanded the closest attention of the large audiences. When taken in connection with the opening address of Prof. Wright, they formed the best demonstration of the vast importance of science, and the close connection existing between science and art, that ever was given in Toronto.

Those present, including a large number of representative practitioners from various parts of the Province, were filled with an enthusiasm which must bring forth rich fruit in the near future. It was a great surprise to many to learn the extent of the facilities of the University for teaching the sciences after the most approved modern fashions. It was a matter of deep interest to others to learn something of the great advances in these subjects. The students were delighted far beyond their expectations, and showed their appreciation by a series of resolutions, flattering alike to their Faculty and to the visiting scientists.

These proceedings will give to the cause of higher medical education in Canada a stimulus the results of which are likely to be far-reaching. Obstructions in the path of progress, and sneers at those who are advancing, are likely to become less common. The shafts of small wit fired at the pillars of science will probably fall flat by the way. Increased interest will be taken in the subjects of chemistry and biology. Let us hope that this is only a beginning of rapid and continuous advances of scientific medicine. The University of Toronto slept too long, while some of the great Universities of the United States and the old world were steadily forging ahead. Let us hope that she has cast aside her lethargy forever.

THE SURGERY OF THE LIVER.

The surgery of the liver is the subject of a communication by Mr. Lawson Tait, in recent issues of the *Edinburgh Medical Journal*. In speaking of the advances made of late in the treatment of diseases of the liver by surgical means he says: "The diseases of the liver which have up to the present time, yielded to the persistent determination of the modern school of surgery to leave no stone untouched in the advancement of the art, are gall-stones, hepatic abscess, and hydatid tumours There are others, and, I am ashamed to say, unknown diseases, which seem to yield to surgical treatment applied to them by accident, and these unexpected successes may some day lead us on the road to other victories, but how these are to be achieved we cannot as yet say. Certainly nothing looked less attractive as a field for surgical research during my student life, some quarter of a century ago, than that which I now regard as the most fruitful upon which I have engaged—the liver."

The operation of cholecystotomy as it is now performed was proposed as long ago as 1570 by Petit, but the brilliant conception was never put into actual practice until Dr. Marion Sims performed an unsuccessful operation in 1878. Mr. Tait attributes the want of success in this, the pioneer case, to "the tinkering delay which is fatal to so much good surgery" and against which he says "it is the duty of good surgeons unceasingly to protest." The case was one of multiple gall-stones and the patient lived eight days after the operation. Dr. Sims sums up in the following words the great lesson that his case teaches us:—"In dropsy of the gall bladder, in hydatid tumours of the liver, in suspected abscess of the liver, and in gall-stones, we should not wait till the patient's strength is exhausted, nor till the blood becomes bile-poisoned, producing hœmorrhages, but we should make an early exploratory incision, ascertain the true nature of the disease, and then carry out the surgical treatment that the necessity of the case may demand." Mr. Lawson Tait was the first to follow out Petit's proposal and Dr. Sims' plan, successfully. The patient, a woman aged 40, was subjected to an operation in August, 1879. A year previous to her admission to hospital, she began to suffer from spasmodic pains of a severe character in the right side, a swelling appeared at the seat of the pain and slowly increased. The pain increased in intensity, her appetite failed and she lost strength and flesh rapidly; on admission she presented an emaciated and almost cachectic appearance. She also suffered at that time from incessant headache and sickness and obstinate constipation. An examination was made under ether but no decided diagnosis was made, and it was then agreed that the abdomen be opened for the purpose of ascertaining the nature of the tumour. The abdomen was opened in the middle line to the extent of four inches, the umbilicus forming the centre of the incision. It then became at once evident that the tumor was a distended gall bladder. An aspirator was passed into the apex, and from twelve to fifteen ounces of a white starchy looking fluid withdrawn. The gall bladder was then opened at the point of puncture, a large round gall-stone was found lying loose in the cavity and removed. A larger stone was detected at the entrance of the duct impacted in it, and evidently the cause of the dropsical condition of the gall bladder. This was adherent to the mucous surface and its removal was a matter of very great difficulty, the danger of tearing the walls and thus killing the patient was very great. A very careful and prolonged lithotrity was performed, and the stone removed piecemeal. The cavity was washed out repeatedly. The wound in the gall bladder was stitched to the upper part of the wound in the abdominal walls by continuous suture, leaving the aperture into the bladder quite open, the rest of the abdominal incision was closed in the usual way. The operation was performed with complete antiseptic precautions and the anæsthetic employed was ether. Bile continued to flow from the wound for eight days; the stitches were removed and the wound was entirely healed on the fourteenth day. The patient has since remained in perfect health.

Mr. Tait has performed the operation of cholecystotomy fifty-five times and fifty-two of the patients have recovered. One old woman died of suffocative catarrh some weeks after the operation and two others died of the cancer of the liver which was probably the cause of the distended gall bladder in one of them, for Mr. Tait found no gall stones which could be removed. In the second the death of the patient four months after the operation revealed excessive cancer with suppuration of the liver. In not a single instance did the patient die from the operation.

An argument against cholecystotomy is that biliary fistulæ remain occasionally and permanently. This must be due to the fact that the operation had been performed at a time when a gall-stone or gall-stones had become impacted in the common duct. The fact that a biliary fistula has been known to occur after cholecystotomy is really one of the strongest arguments against the rival operation of cholecystectomy and the greatest argument in favor of the operation of Petit. We now know perfectly well that we can overcome the discomfort and trouble of a biliary fistula by making an artificial junction between the gall bladder and an adjacent coil of intestine. In this way we can secure the return of bile to its proper route, and free the patient from the discomfort of a fistula.

This has recently been proved to be a successful operation, by Mr. Mayo Robson, of Leeds. Mr. Tait states that in all probability, the larger number of cases of biliary fistula resulting from obstruction of the common duct by a stone lodged there at the time of operation, may be completely relieved by the operation of cholelithotrity—that is, to make a fresh opening in the abdomen and crush the stone outside the walls of the duct by means of padded forceps.

Mr. Tait holds that accurate diagnosis within the abdomen is rarely possible. He relates as an instance a case of large abdominal tumor which presented all the appearances and signs of a parovarian cyst, and which was recognized as such by him; on opening the abdomen he was amazed to find an enormously distended gall bladder.

In some instances unknown diseases seem to yield to surgical treatment applied to them by accident. Mr. Tait has more than once drawn attention to the astonishing disappearance of tumours after mere exploratory incision. These have mainly been cases of diseases of the liver, spleen, and head of the pancreas; other cases in which the exact site of origin of the growth could not be accurately ascertained have also been known to disappear. Mr. Tait is satisfied that the mere opening of the peritoneal cavity has a direct influence in setting up the process of absorption of the tumor. That some emphatic physiological change is at once set up by opening the peritoneal cavity is clearly indicated by the uniform onset of a most distressing thirst, which lasts for days, and is not seen so markedly after any other operation. Let the incision in the abdominal wall be made down to the peritoneum and let the serous cavity remain unopened, and this thirst is not marked. But let the peritoneum be opened but a finger's breadth, and the result is marked.

The treatment of tubercular peritonitis by abdominal section has shown us that we can cure permanently and speedily cases which have gone even as far as suppuration, by opening and cleansing. In the bad cases, in all probability the cleansing is never complete no matter how much time and care is spent on it. And in non-purulent cases Mr. Tait very often does no cleansing at all, but he merely empties out the serum, and puts in a drainage tube. Yet the majority of these cases are cured by these simple means.

Four cases are recorded in which the abdomen had been opened for the purpose of removing enlarged spleens, in all of these cases the operation was not proceeded with on account of the hopeless outlook. Strange to say, in three of these the tumour has disappeared. The fourth patient succumbed to the exploratory incision.

Modern surgery is to be congratulated upon the distinct advance it has made in the treatment of abscesses of the liver, and hydatid tumours of that organ. Mr. Tait has even deliberately and successfully opened the tissue of the liver, to remove a hydatid tumour.

NOTES.

MR. MULOCK, the Vice-Chancellor of the University of Toronto, entertained the members of the Senate, the Medical Faculty and the American visitors at a dinner in the Toronto Club on the evening of December 21.

THE *Medical News* VISITING LIST 1890.—This visiting list is prepared and sold by Messrs. Lea Bros. & Co., the well-known medical publishers of Philadelphia. It is very conveniently arranged for the practitioner, and, in addition, contains much valuable information on doses of drugs, treatment of emergencies, methods of examining urine, the use of disinfectants, etc.

DR. GOODELL'S ARTICLE.—Acting on the suggestion of one whose opinion always commands the highest respect in Ontario, we publish in this issue the excellent article by Dr. Goodell which appeared in the *Medical News*, although it occupies more space than we usually allow for selections. Dr. Jacobi, of New York, says "it is the best and probably most useful paper published in a medical journal these many years."

POST-GRADUATE COURSES IN VIENNA.—The number of English and American physicians attending courses in Vienna is large. In November there were eighty fresh arrivals. More than sixty courses of four to six weeks are conducted during a session. The courses in

laryngology, ear diseases, and gynæcology are apparently the best attended. An Anglo-American Association has been formed with the approval of the Austrian Government.

FOOT BALL CASUALTIES have been rather common during the last season in England. The Rugby appears to be more dangerous than the Association game. In the latter part of November a student at the training college, Winchester, was so violently kicked that his spine was seriously injured. At Hungerford Downs a player had his collar bone broken. At Belfast there was a leg broken and a knee-cap fractured. These are only a few among many causualties reported.

THE SCIENTIFIC ADDRESSES AT THE OPENING OF THE NEW BUILDING OF THE BIOLOGICAL DEPARTMENT.—We will publish in our next issue the admirable addresses of Professors Ramsay Wright, Osler, Welch, Minot, and Vaughan, if we have space. If we have not room for all we will publish as many as we can, and give the remainder in the following issue. In this number we give a full report of two meetings of the Pathological Society of Toronto. One ofthese was unusually interesting in consequenceof the prominent part taken therein by the distinguished visitors from the United States.

THE CREDIT SYSTEM IN MEDICAL EDUCATION.—A curious system prevails in some of the French medical colleges of the province of Quebec as pointed out by the *N. Y. Medical Journal*. Young men without means when properly recommended (whatever that means) can obtain their tuition and degree in due course, in return for which they give their promissory notes. These notes are to be redeemed when success in practice enables these pauper graduates to pay their debts. Many frequently forget to do this, and in two cases lately the delinquents were sued by the medical college.

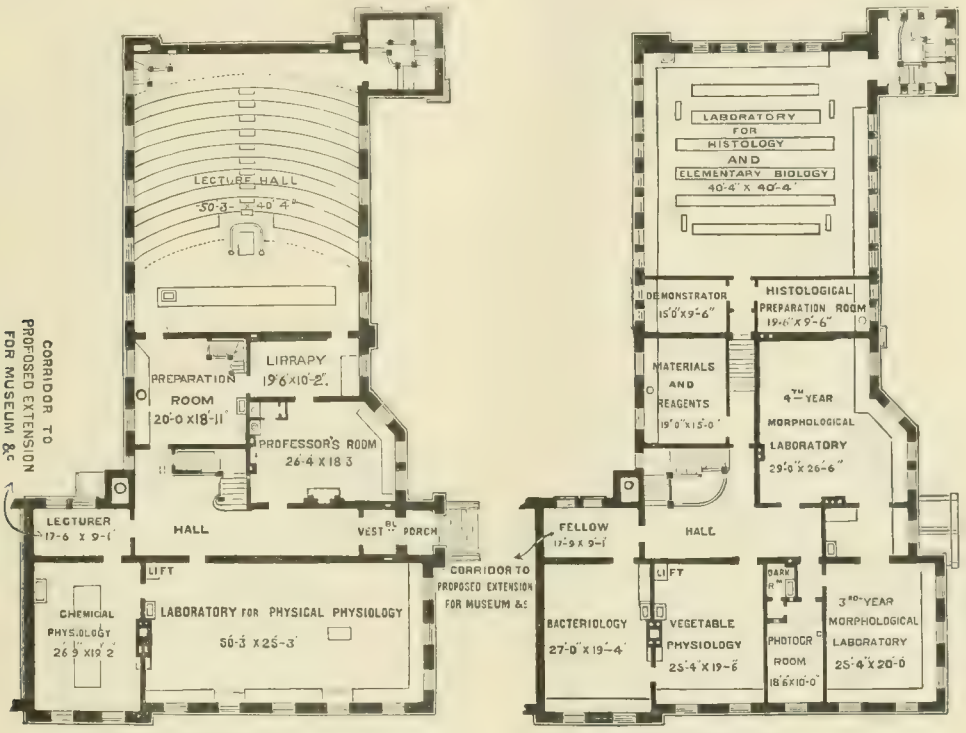
For anæmic women, subject to fainting fits and attacks of pain in the region of the solar plexus (*Medical Brief*), valerianic ether has proven (when given in pearls containing five minims) a very useful stimulant.

THE NEW BIOLOGICAL DEPARTMENT, UNIVERSITY OF TORONTO.

At the opening exercises of the new building of the Biological Department, Dec. 16 and 20, the following with others were present:

The President of the University, Sir Daniel Wilson, in the chair. Prof. Welch and Prof. Osler, of Johns Hopkins University, Baltimore; Prof. Minot, of Harvard University; Professor Vaughan, of Ann Arbor University; Prof. W. T. Aikins, the Dean of the Mecical Faculty; Dr. McMahon, M.P.P., Dundas; Dr. Buck, Palermo; Dr. Bonner, Bolton; Dr. J. D. Bonner, Buffalo; Dr. Husband, Hamilton; Dr. Freeman, Milton; Dr. Rae, Oshawa; Dr. Ross, Dundas; Dr. Robinson, Brampton; Dr. McKinnon, Guelph; Dr. King, Port Colborne; Dr. Savage, Weston; Dr. Gardiner, London; Dr. Lesslie, Hamilton; Dr. Hillary, Aurora; Dr. McLennan, Trenton; Dr. Wilson, Richmond Hill; Dr. Howland, Huntsville; Dr. King, Port Hope; Dr. McNaughton, Erin; Dr. More, Brampton; Dr. Gowanlock, Warsaw; Dr. Bogart, Whitby; Dr. Langrill, Cheltenham; Mr. Waldron, Collegiate Institute, Whitby; Dr. Warren, Brooklin; Dr. MacCallum, London; Rev. Dr. Birchill, Mount Forest; Mr. Sylvanus Phillips, B.A., Mount Forest; Dr. Dillabough, Hamilton; Dr. Walters, Little York; Rev. Father Henning, Dr. Canniff, Rev. Dr. Sheraton, Rev. D. J. Macdonnell, Prof. Loudon, Prof. Ashley, Prof. Baker, Prof. Hutton, Prof. Ellis, Dr. Winnett, Dr. Garrat, Rev. G. H. Sandwell, Dr. Wallwin, Dr. Barton, Dr. Cassidy, Dr. H. Robertson, Dr. E. Langtry Hall, Dr. Ray, Dr. Bryce, Dr. Patullo, Dr. Scadding, Dr. Greig, Dr. May, Dr. B. E. McKenzie, Dr. Jas. Ross, sr., Dr. Dame, Dr. A. M. Rosebrugh, Dr. Armstrong, Dr. Bentley, Dr. Carlyle, Dr. Cotton, Dr. N. Bethune, Dr. Newman, Dr. I. H. Cameron, Dr. Acheson, Dr. Spragge, Dr. Grant, Dr. Carveth, Dr. Gardner, Dr. Morson, Dr. Thompson, Dr. Lehman, Dr. Price Brown, Dr. W. T. Stuart, Dr. F. A. Knapp, Dr. McIntyre, Mr. A. Blue, Mr. Robert Awde, Mr. D. B. Dick, Prof. Richardson, Prof. Oldright, Dr. Peters, Dr. Adam Wright, Dr. Ferguson, Dr. W. P. Caven, Dr. J. E Graham, Dr. Primrose, Dr. T. McKenzie, Dr. A. B. Macallum, Dr J. Caven, Professor Thorburn, Dr. McPhedran, Dr. W.

W. Ogden, Dr. U. Ogden, Dr. D. Clark, Dr. J. M. MacCallum Dr. J. F. W. Ross, Dr. Rose, Dr. J. Wilson, Dr. Chamberlain, Dr. Ghent, Dr. Harley Smith, Dr. Reeve, Dr. Burnham, Dr. Féré, Dr. Atherton, Dr. Spencer, Dr. A. Jukes Johnson, Dr. T. S. Covernton, Dr. Sheard, Dr. Temple, Dr. Carson, Dr. Merritt, Dr. Machell, Dr. Stevenson, Dr. Burns, Dr. McFarlane, Dr. Powell, Dr. Jones, Dr. W. H. Aikins, Dr. Avison, Dr. Bray, Dr. Cuthbertson, Dr. C. M. Foster, Dr. Little, Dr. Nesbitt, Dr. G. B. Smith, Dr. Sweetnam, Dr. Thistle, Dr. Baines, Dr. A. A. Macdonald, etc.



Plan of Ground Floor. Plan of First Floor.

DESCRIPTION OF THE NEW BUILDING OF THE BIOLOGICAL DEPARTMENT OF THE UNIVERSITY OF TORONTO.

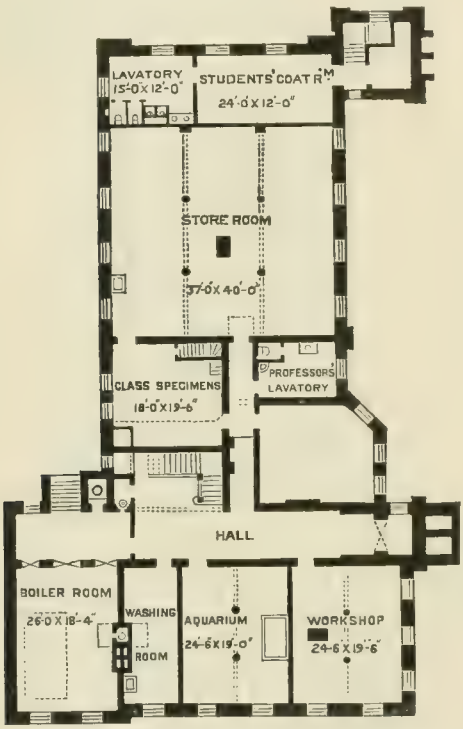
The Biological building is situated on the west side of the crescent in the Queen's Park, on the site of the old brick building which served, for so many years, as a home for the Toronto School of Medicine, and is therefore associated with the student days of many readers of the PRACTITIONER. Within recent years it has been occupied by the students as a gymnasium and place of meeting of the college societies, and has been known as Moss Hall. The new building is a substantial structure in the Scottish Norman style, harmonizing with the University itself, but simple and unpretentious in character. The materials used are brown and grey Credit Valley stone for the basement and general face of the walling, and brown stone for the dressings. The principal feature of the eastern elevation is the lecture hall, which is at the north end of the building, with a staircase tower and bell turret at its north-east corner. This staircase is exclusively for the use of students, and gives access to the waiting-rooms, lecture hall, and large laboratory over it, without the necessity for passing through the main building. The principal entrance is through an arched porch on the east front, and opens on the main corridor running east and west, from which the main staircase rises. Opening on this corridor on the north side is the professor's private laboratory, communicating through the preparation room, and a small library with the lecture hall.

This is a very handsome room, seated for 250 students, but having floor space which is available for many extra seats, as was apparent on the opening day. The seats are comfortable theatre-chairs, each being provided with a folding tablet

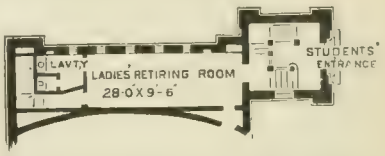
for note-taking. The staging on which the seats are fixed is arranged on an "acoustic curve," the height of the steps increasing as they recede from the front, with the result that the occupants of the back seats can see over the heads of those in front of them. On the south wall of the lecture room are various devices for illustrating lectures, a fixed blackboard has a movable one suspended in front of it, and at either side are diagram frames running on guiding wires, which may be raised and lowered at pleasure. In front of the blackboards a plaster disc of 8 feet diameter can be pulled down. The disc was cast upon a plate glass surface with the finest plaster, so as to afford a suitable surface for receiving the images of microscopic preparations projected by the Zeiss projection microscope. It is also employed for receiving ordinary lantern projections. A brick column independent of the floor rises from the room below, and prevents any vibration of the projection instrument. At present there is no electric light in the building, but the gases for lime light are stored in cylinders in the basement, and the water pressure can be turned on to these in the lecture room. The room can be darkened rapidly by drawing down painted shades, which run behind strips attached to the window-casings. Advantage is taken of the space under the staging of the lecture hall to form a ladies' waiting-room, which is entered from the tower staircase, but has also a private stair up to the lecture hall for the exclusive use of the lady students.

On the south side of the main corridor are the laboratories for physical and chemical physiology in charge of Dr. A. B. Macallum, whose private room is at the end of the corridor. The large physiological laboratory can be darkened in the same way as the lecture room. It also has an independent brick column for galvanometric work, as well as stone and wooden benches suspended on the east and south walls for supporting other instruments which require to be free from vibration.

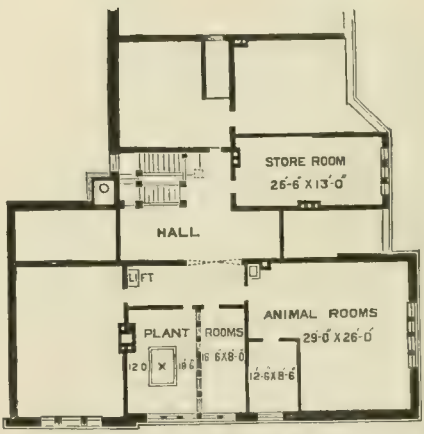
The first floor contains the laboratory for histology and elementary biology, arranged for one hundred students working simultaneously, when the tables in the centre are occupied, but generally only used for classes of forty, engaged in microscopical work. The walls are occupied by



Plan of Basement Floor.



PLAN OF MEZZANINE UNDER LECTURE HALL



Plan of Second Floor.

lockers, in which the students keep their histological reagents, etc.

Attached to this large laboratory are a private room for the use of the demonstrators, and a histological preparation room, in which the material is prepared and stored for the classes in histology and elementary biology.

These rooms over the lecture-hall communicate with the rooms over the front of the building by means of a flight of steps. The latter rooms are chiefly used by the senior students of the Arts Faculty, and include special morphological laboratories for third and fourth year students, with a small common room between them in which there are facilities for imbedding, injecting, etc. Each laboratory contains a large case with specimens and models illustrating the prescribed work for each class. A full set of Ziegler's models, illustrating the development of the vertebrates, *e.g.*, occupies the greater part of the case in the fourth year room.

There are also on this floor two rooms devoted to vegetable physiology and bacteriology, at present under the charge of Mr. J. J. Mackenzie, Fellow in Biology. A photographic room, with separate dark room, both finished in dead black throughout, have been specially arranged for photomicrographic work. There is a second floor over the southern portion of the building which contains besides several rooms for other purposes, two plant rooms, so arranged that a different temperature can be maintained in each. The whole of the front and roof are of glass, and face the south so as to get the sun all day. The floors are of concrete, supported by iron beams and brick arches, and are impenetrable to water, while the walls are finished in cement, so that the hose can be used in these rooms and in the adjoining animal rooms as in an ordinary greenhouse. The basement contains the aquarium, workshops, storerooms for various purposes, lavatory accommodation, and the heating apparatus. The heating is by steam, mostly by direct radiation, but the indirect system is also used to a certain extent for purposes of ventilation. Stacks of steam radia ors are enclosed in boxes under the basement ceiling, into which cold, fresh air is brought from the outside, warmed, and delivered to the rooms above through tin tubes and registers. The foul air is extracted into a duct which is led to the base of the main chimney shaft, which is about sixty-five feet high, and up which it passes. This consists of a brick shaft of about four feet square, and inside, it is the smoke pipe from the boiler, the waste heat from which warms the air in the shaft. This is supplemented by a large coil of steam pipes placed at the bottom of the shaft, so that a steady upward current is maintained at all times. The heating apparatus in the lecture-hall and some other rooms is controlled by the Johnson electric heat-regulating apparatus. By means of a thermostat placed in the room and an electric wire, a compressed air apparatus is made to act upon the valves of the radiators, opening or closing them as the temperature of the room falls or rises. By this means the temperature is so regulated that at the end of a lecture it is found not to have varied more than one degree from what it was at the beginning. The difference which the use of this system makes to their comfort is appreciated both by professors and students. The compressed air for this purpose is obtained by an air pump actuated by the water pressure and connected with it by a pressure-reducing valve, so that the pump stops when the pressure in the cylinder attains twelve or thirteen pounds, and works again when the pressure falls below this point. The compressed air is also available for use at other places for blast or for injecting purposes. The plumbing throughout the building is of the best and most modern description. The building, including fittings, has cost about $55,000, and was erected from the designs and under the superintendence of the University architect, Mr. David B. Dick.

Meeting of Medical Societies.

PATHOLOGICAL SOCIETY OF TORONTO.

REGULAR MEETING, NOV. 30, 1889.

Dr. Reeve, President, in the chair.

Adjourned discussion on case of Multiple Cerebral Abscesses.

Dr. J. E. Graham asked if any cause was known for the pyæmia; the post-mortem report and the history did not show any.

Dr. W. P. Caven thought the fact that the abscesses were multiple pointed strongly to their being of pyæmic origin.

Dr. Graham asked if multiple abscesses occur oftener in the brain from idiopathic than from traumatic pyæmia. Multiple abscesses do occur in the brain when there is but one depot of pus elsewhere.

Dr. R. A. Reeve wanted to know how the pus had been transmitted in this case. Had it been by the lymphatics or by the blood vessels? In cases of purulent otitis we find abscesses surrounded by healthy brain tissue and no traceable connection between the diseased bone and the abscess.

Dr. Graham suggested that the green color of the pus was due to some peculiar micrococcus.

In the absence of Dr. J. Caven, Dr. James MacCallum presented the following specimens: Enlarged Prostate, Hypertrophied Bladder, Obstructive Nephritis, Phleboliths in Prostatic Veins. The specimens were obtained from a man of about sixty years of age, who died in the Toronto jail. The bladder was markedly hypertrophied; there was a very great enlargement of the middle lobe of the prostate, fibromyomatous in character. The lobe had diminished considerably in size while in spirit, but was still the size of a walnut. Both ureters were dilated, and the usual condition of the kidneys as a consequence of obstruction was well marked. The heart was enlarged, a universal hypertrophy, not merely a hypertrophy of the left side as is usually found in disease of the kidney. The lungs were pale and emphysematous; the lower lobes, œdematous, and presenting an approach to hypostatic pneumonia. The radial arteries were atheromatous. This case is interesting not only on account of the great enlargement of the middle lobe of the prostate and the size and number of the phleboliths, but because of the relation of all the morbid conditions, which seem directly traceable to the original bladder condition; although it it is quite possible that there may have been another causative element, as shown in the atheromatous radials. When first removed from the body the enlarged lobe of the prostate seemed almost large enough, in a contracted state of the bladder, to block up the orifices of the ureters.

Dr. Primrose thought that the urine could pass up through the mouth of the ureters. He had seen a dilated and very tortuous ureter fully three-quarters of an inch in diameter, and he thought that urine could pass up such an one. He considered that the sequence of events in this case probably was:

1. Obstruction at the bladder orifice of the urethra, due to enlarged prostate.

2. Distension of bladder and consequent closure of ureters.

3. Distention of ureters throughout their entire course, including enlargement of orifices into the bladder: subsequently regurgitation could occur.

Dr. Cameron agreed with Dr. Primrose that if there was dilatation of the ureter there might be regurgitation, especially when, as in this case, there was an enlarged prostate preventing the urine from passing into the urethra.

Drs. McPhedran and Peters considered that regurgitation from the bladder into the ureter was impossible, Dr. Peters advancing as an argument against such a possibility, the obliquity of the ureter in its course through the wall of the bladder; it being about three-quarters of an inch in length from its entrance at the serous coat to its orifice in the mucous. When the bladder was dilated by the urine retained on account of the enlarged prostate, the pressure of the retained urine would mechanically tend to press together the walls of the ureters as they ran obliquely through the bladder wall, and thus occluding them, prevent regurgitation. The same condition was seen in the closing of the orifice of the common bile duct by dilatation of the duodenum. Experimentally it had been proven impossible for water to regurgitate from the bladder. He thought that the dilatation of the kidney had occurred owing to the kidney continuing to secrete against the pressure due to occlusion of the ureteral orifices.

Dr. Cameron said that Dr. Peters' arguments were quite true, provided the bladder walls have not been changed and become thinned, for in hypertrophy with dilatation the obliquity of the ureter in its course through the bladder wall is lost

SYPHILITIC ARTERITIS.

Dr. J. E. Graham: The patient, a woman about 35 years of age, was sent from the Toronto Jail to the Toronto General Hospital. She was then in a semi-comatose condition: there was no paralysis of the limbs. At first there

was doubt as to whether the condition was one of typhoid fever or disease of the brain. There was dilatation of the right pupil, ptosis of the right eyelid, congestion of the right conjunctiva. Syphilitic cicatrices were found on the body.

Post-mortem examination showed endarteritis of the basilar and also of the middle cerebral arteries, as well as in the smaller subdivisions of these vessels. The vessels could easily be seen to be thickened, beaded in some localities, and in places even completely occluded. The meninges of the brain were thickened; two minute hæmorrhages were found, one into the pons, and the other into the medulla. No thrombus found. Ventricles dilated.

Dr. Oldright had seen her at the jail, and thought her to be suffering from syphilitic disease of the brain. She had had some diarrhœa, but that was traceable to Epsom salts. Temperature 102.2. She did not look like a typhoid patient. She was said to have had a good deal of headache. Dr. Richardson had seen her at the jail off and on for years, and knew that she had syphilis.

Dr. Cameron asked if alcoholism as well as syphilis might not have caused this arteritis?

Dr. Primrose said that before calling the arteritis syphilitic, the syphilitic history must be well established. In syphilis the thickening occurs first in the coats of the arteries without there being any thrombus. He referred to a case under his care in the Temperance Hospital, London; this case is now narrated in Erichsen's Surgery, Vol. II . 115, 8th ed.

Dr. McPhedran asked whether the other and larger arteries showed atheroma. The beading of the arteries he thought almost characteristic. Are these beadings gummatous in nature?

Dr. Cameron asked why one-sided beading was present in syphilis rather than in atheroma? The beadings are not gummatous, because they do not break down, but are organized.

Dr. A. B. MacCallum thought on closer examination that the artery seen under the microscope to contain an organized thrombus, was really occluded by thickening of the walls of the artery.

Dr. Primrose said that he had thought that syphilitic arteritis was confined to the small vessels. In it there were no calcareous plates, and the arteries became occluded by hypertrophy of the intima. Atheroma, on the other hand, attacks the large vessels, and in it calcareous plates occur.

Dr. Graham, while confessing that the case was incomplete, still held that there was sufficient evidence of syphilis, in the cicatrices and the one-sided beading of the arteries. Syphilis might, he thought, attack the larger vessels, carotid, vertebral, even the aorta. Syphilitic arteritis would not be symmetrical.

The discussion on syphilitic arteritis was adjourned until next meeting.

Dr. Wm. Oldright presented a specimen of aneurism involving the transverse and descending parts of the arch of the aorta. The aneurism posteriorly had eroded the fourth and fifth dorsal vertabræ, destroying their bodies, and anteriorly had reduced the second and third ribs to mere shells. The aneurism had opened into the left lung, burrowing out a large cavity. This cavity apparently had existed for some length of time. The immediate cause of death was rupture of the wall of this cavity in the lung, and hæmorrhage into the pleural cavity.

The patient from whom this specimen was obtained was a merchant, age 50. He consulted Dr. Oldright for indigestion. Six months later he came complaining that the pain had returned, and was higher up, and that he was slightly swollen. Examination disclosed a well-developed aneurism pulsating at the second rib on the left side. No bruit, nor palpitation, or discomfort. A month later there was no bruit, but the pain in upper part of right chest was intense. No change in symptoms for remaining three months of patient's life. Five days before death there was hæmoptysis.

CHYLOUS PLEURISY.

Dr. Cameron:

Mrs. A. B., æt 22. About five months previous to pregnancy had severe pain in left inguinal region, with considerable circumscribed swelling, which gradually passed away with a discharge from the vagina. This discharge continued during gestation, ceasing about two months after confinement. About seventh month of gestation she began to suffer from pains in the left side

examination showed this to be due to fluid in the pleural cavity. By aspiration fluid was removed similar in character to the specimen

shown. During the past nine months, at intervals of from one to six weeks, the fluid has been removed, the quantity ranging from one and a half to six pints (wine measure). The fluid has at times coagulated in about three minutes after removal; at other times it has remained fluid at the end of two or three weeks.

Condition of patient when seen by Dr. Cameron: She was pale and anæmic, yet fairly well, in spite of having passed through a severe labor. She complained of epigastric pain and pulsation. Examination showed this to be due to the aorta. There was a hard, irregular, and ill-defined mass in front of the aorta, either the retro-peritoneal glands or the head of the pancreas. This mass was said to have been there from the first. Uterus was anteflexed; ovaries slightly enlarged. No signs of an old pelvic abscess. Heart displaced to the right, and pleura full of fluid; nothing found at the root of the lung.

Dr. Miller, of Cornell University, has twice analyzed the fluid. The first sample he reported to be milk; the second was not milk.

Dr. Clark, of Thorold, thought this case resembled one reported by the younger Flint, of obstruction of the thoracic duct by the pressure of the pregnant uterus.

Dr. Cameron thought that the presence of the chyle within the pleural cavity was due to disease of the root of the lung (enlarged bronchial glands), causing obstruction of the lymph channels, consequent dilatation, stasis, and rupture of the lymph vessels. The physical signs did not bear this out; still, the general appearance of the woman, who is of the dark, coarse, strumous type, permits one to believe this the case. In the last number of the *American Journal of the Medical Sciences*, Busey has collated 64 cases of chylous effusion, 10 of which are of chylo-thorax. Of these the effusion came directly from the duct in five; three were due to violence. Dr. Cameron then exhibited two small samples of the fluid; they were both of a thick, white, milky appearance. One had coagulated, the other had not.

Dr. McPhedran asked what caused the vaginal discharge. Was it also chyle, and due to the pressure of the uterus?

Dr. Graham had seen the case presented by Dr. Whitla, at the Belfast meeting of the British Medical Association. The fluid was the same in appearance as this.

Drs. A. B. MacCallum and Acheson, who had examined the fluid microscopically, agreed that it contained fat globules and bacteria, but no pus corpuscles.

Dr. Cameron thought that the vaginal discharge was probably chylous, due to a chylous ascites making its way into the retro-peritoneal tissue.

Discussion adjourned until next meeting.

A special meeting of the Society was held on the evening of Friday, December 20th. There were present as the guests of the Society, Professors Welch and Osler, of Johns Hopkins University, Minot, of Harvard University, and Vaughan, of the University of Michigan.

DISEASES OF CORONARY ARTERIES AND ALTERATIONS IN THE MUSCULAR WALLS OF THE HEART.

Professor Welch said that since the discovery of Auscultation by Lænnec, our knowledge of valvular disease of the heart had greatly increased. Little attention, however, had been paid to the diseases of the coronary arteries and of the muscular walls of the heart, because as the symptoms were not characteristic, there could be but little precision in diagnosis. Nevertheless these diseases are of great importance to the physician as they are very common causes of sudden death. The cases of sudden death which we so often see described in the public newspapers in which death is said to have occurred "in a moment," and to have been due to apoplexy, or to heart disease, are very often really due to disease of the coronary arteries. The general practitioner should have a special interest in these diseases, for death occurs from them more often in the middle aged or elderly and well-to-do than in the poor.

The coronary, like other arteries, may be affected by arteritis obliterans, arteritis deformans, thrombi, or emboli. Very commonly a thrombus was found just where the anterior coronary artery gives off its main branch.

The question arises, why is death so sudden? Clinically there are two classes of cases; those in which there may have been attacks of angina pectoris, or the signs of cardiac insufficiency, without any valvular lesion, hypertrophy or dilatation; and those in which there had never

been any complaint, people apparently in good health; in both classes however death was sudden. Post mortem examination shows that the lesion in the artery is a permanent one, yet the symptoms are sudden and paroxysmal in their onset. We cannot explain why this is. It may possibly be that the heart does not suffer until certain areas lose their nutrition. Experiment has shown that in the dog's heart there is a spot which, if punctured, causes immediate cessation of the heart's action. It may be that in the heart of man there are such spots from which nutrition being shut off, death immediately ensues. Experiment has also shown that if a limited portion of the coronary supply is cut off, the heart still goes on, but if more and more is cut off, the heart stops.

With disease of the coronary arteries the muscle walls, the pericardium, endocardium and valves may be found intact, but in most cases there are associated muscular lesions, namely, fibrous myocarditis, fatty degeneration, white infarction.

In fibrous myocarditis, which is also known as cirrhosis of the heart, and as chronic interstitial myocarditis, there are found in the muscular walls grey translucent or white patches of irregular shape and size, in which the muscle has been replaced by connective tissue. These patches situate in any part of the wall may be complicated with pericarditis or with endocarditis. These patches were commonly thought to be like fibroid patches in other parts of the body, the results of interstitial inflammation. As Hilton Fagge has pointed out, this cannot be, for we do not find in them any sign of inflammation, any granulation tissue, any small cell formation. These patches are nearly always associated with disease of the coronary arteries, so that they may be considered the result, not of genuine inflammation, but of the death of localized patches.

Thickening of the walls of the coronary artery causes the nutrition of the muscle to be cut off, and degeneration occurs, the muscle fibre drops out and is replaced by connective tissue. The fibrous tissue is of slow growth and never preceded by true granulation tissue. We see the same process in the liver and the kidney, where, as a result of malnutrition, the most highly differentiated parts of the organ degenerate. These so-called fibroid patches are probably due to coagulation necrosis of the muscle fibre, as in fibroids of the uterus.

An interesting point is the enormous increase in size, three or four fold, of the nuclei of the adjacent and normal muscle cells. Whilst we affirm that these patches are not the result of pre-existing inflammation, we do not deny that there may be patches of that origin. For you may see in this specimen of the heart of a hog, which died of hog cholera, genuine fibroid patches, along the edges of which genuine granulation tissue is found, and in which there is no disease of the coronary arteries. We cannot, therefore, entirely discard the old view.

Disease of the coronary arteries may produce genuine white infarctions in the heart walls, resembling those found in the kidney and the spleen.

[A specimen was exhibited in which a thrombus had formed in the apex of the left ventricle, a portion breaking off obstructed the anterior coronary artery completely, thus causing anaemia of the wall, coagulation, necrosis, and a white infarction.]

A young man of thirty-five, suffering from transverse myelitis, with paraplegia, paralysis of the bladder and rectum, bedsores developed just before death, fever, irregular pulse, dyspnœa, etc. Post mortem examination showed the muscle walls to be unusually flabby and yellow. The microscope shows the entire heart wall to be diffusely infiltrated with white blood corpuscles. This is a pathological curiosity, a genuine diffuse interstitial myocarditis. Micrococci were found in the sections, but there were no foci of pus in the walls, so that it was not a regular septic suppurative inflammation.

Circumscribed myocarditis is not so rare. In various acute infectious diseases, diphtheria, pneumonia, typhoid, and typhus, there are found in the heart small areas of small celled infiltration. In many of these cases the muscle fibres do not show any degeneration, but often careful search discovers small areas. This circumscribed myocarditis may be the real cause of the heart failure in these diseases.

Fatty degeneration of the heart muscle often occurs in connection with disease of the coronary arteries. This condition is also found in the acute infectious diseases, due to high temperature or other causes. If an animal be put into a box

which is well ventilated, and the air of which is kept at a high temperature, fatty degeneration does not occur, but if the box be ill ventilated, the degeneration is almost constant. Fatty degeneration alone is of but little importance, but if associated with disease of the coronary arteries, the case is altered. Rabbits' hearts had been made fatty by artificial means, but no alteration in function could be made out. It may be, however, that the heart gives way all at once.

The fat is chiefly deposited at the point of junction of the vertical lines with the anisotropic lines.

The best results were to be had by making frozen sections of the fresh heart wall, treating them with osmic acid and mounting them in acidulated glycerine.

Professor Osler related the history of a case of obliterating arteritis of the anterior coronary artery. The patient, a physician, was under his observation for six weeks. He was a large, well-built man, with no history of syphilis. One day when getting into his carriage he was suddenly attacked with slight cardiac distress, but was able to do his work. From that time there was cardiac uneasiness, which in three weeks had increased so as to force him to take to his bed, with extreme dyspnœa, small, weak, irregular and rapid pulse, and slight cyanosis of the finger tips. Death occurred two weeks later.

The autopsy showed complete obliteration of the anterior coronary artery. Fibroid degeneration of the apex of the left ventricle, slight dilatation at that point.

A similar case was that of an idiot aged thirty-six, a powerfully built man, docile and quiet, who, although he had never displayed any heart or lung symptoms, suddenly dropped dead Autopsy showed complete obliteration of the posterior coronary. Only one branch of the anterior artery, that passing down the interventricular groove, was pervious.

The classical description given in the text books of fatty degeneration of the heart was really that of myocarditis.

SYPHILITIC ARTERITIS.

Dr. Graham briefly narrated the history of the case, and the histological appearances of the specimen presented at the November meeting of the Society. The point reserved for discussion was whether it was possible to distinguish histologically the syphilitic from the other varieties of arteritis.

Prof. Osler said that even Heubner himself had receded from the view that syphilitic arteritis had distinctive histological appearances. One cannot with the microscope distinguish syphilitic arteritis from the obliterating arteritis in old people, or that found within the cavities of phthisis. He had never seen obliterating arteritis of the cerebral vessels, with beading, that was not syphilitic. He then exhibited a specimen of genuine syphilitic arteritis associated with a large gummatous growth in the cord.

PATHOGENIC GERMS IN DRINKING WATER.

Prof. Vaughan said that as the State University of Michigan was required to examine all samples of suspected food and drink sent by the local health officers, he had from time to time to analyze many samples of drinking water. At first he had been in the habit of reporting, say, that the water was bad chemically, but that it did not contain any pathogenic germs. The effect was bad, for the people continued to use the water, arguing that if there were no pathogenic germs in it the water was fit to use. Of late he had adopted the plan of reporting that the water was chemically bad, and that an injection of so many drops of a culture of the germs contained in the water killed a rabbit. The effect was much more satisfactory.

Usually both a chemical and a bacteriological examination was made of the sample of water. Plate cultures were made, and a report sent of the number of bacteria in a given quantity and of the varieties.

The procedure adopted was to take a cubic centimetre of sterilized beef tea, add to it one drop of the water. Place it in an incubator, where it was kept for 24 hours at the temperature of the body. The whole was then injected into the peritoneal cavity of a rabbit, or if a rat 10 to 20 drops were used. In most cases the animals die within 24 hours. A rat will bear 25 drops of a sterilized solution, while 10 drops of a non-sterilized will kill them. Autopsies are made upon all animals thus killed, and cultures are made from the spleen, liver, and kidneys.

The germs vary in the rapidity with which they kill; one kills in 24 hours, another not for twenty days, producing emaciation, fever, paralysis and

death. This latter germ seems after a while to die, for cultures made from liver, kidney, and other organs, remains sterile.

Some of these germs, though killing rabbits, do not affect man. There is a qualitative as well as a quantitative element in the action of these germs. For instance he had received two samples of water from Grand Rapids, labelled No. 1 and No. 2. No. 1 contained 30,000 germs in a drop; No. 2 contained 120. No. 2 killed rabbits; No. 1 did not. No. 1 was better chemically than No. 2.

The pathological changes produced vary. The germs which killed the rabbits in 20 days produced ulceration of the ascending colon, and of the lower part of the small intestine. Lower 2 or 3 inches of lower part of small intestine were denuded of epithelium.

A case of continued fever was cited in which one after another of the family were taken down until at last five were ill. The only cause which could be found was the use of cistern water for washing the face and teeth, one of the family had used this same water in a nasal douche. The whole family used the city water for drinking purposes. No one was sick in the surrounding families. The cistern water was vile chemically, and contained a great number of germs, and invariably killed the animals. He was not sure that the fever was typhoid; all the cases ran 42 days. Temperature ran high at first, some delirium; no abdominal eruption.

In another instance seven people in neighboring families had continued fever from using the water of a well common to all. The water was very bad chemically. The test for phenol was given by it, showing that it had been contaminated by fæcal matter.

Cultures of the various germs spoken of were exhibited.

PSEUDO-PATHOLOGICAL CHANGES IN THE PREGNANT UTERUS.

Prof. Minot described the peculiar large triangular cells which have by some been described as characteristic of moles, but which are a normal appearance in the walls of the uterus. As pregnancy begins the uterine glands are elongated and widened; their lining epithelium is thickened and enlarged. Fissures appear, separating the cells. The cells continue to enlarge, separate from each other and from the uterine wall, and thus are produced the large triangular cells seen in moles. The history of these cells has not been elucidated. They disappear after the 5th or 6th month of pregnancy.

Other changes in the uterine wall and in the fœtal portion of the placenta were described, changes which were normal, but which many observers have described as pathological. A knowledge of embryology must precede any attempt to describe uterine pathological changes.

CHYLO-THORAX.

The adjourned discussion was opened by Dr. I. H. Cameron, who briefly related the history of the case.

Prof. Welch said that these cases may be divided into two classes: oily hydrops pleuræ, and chylo-thorax. From the history given he thought that the case was one of chylo-thorax.

There are some eminent authorities who urge that these cannot be cases of chylous effusion, for grape sugar is absent in these chylous effusions, while in chyle it should be present. They also urge that there has never been found any rupture of the vessels.

In spite of these authorities, eminent as they are, it may be accepted that there do occur genuine cases of chylo-thorax. In Whitla's case, Redfern, of Belfast, a most careful anatomist, found rupture of the thoracic duct. Strauss demonstrated in his case, by giving butter, that there was a rupture. The effusion is most often due to obstruction by damming back at the radicles, not of the thoracic duct. It may be due to actual ulceration into the lymphatic vessels, by tubercle, cancer, etc., or there may be lesion of the mediastinal glands.

Hospital Reports.

CASE OF PUNCTURED FRACTURE OF THE SKULL—APHASIA—TREPHINED —RECOVERY.

(Under the care of I. H. Cameron, M.B., in Toronto General Hospital.)

A. P., aged 11 years, was crossing the Don bridge on the morning of November 25th. He met a companion with whom he had previously had a quarrel, and he at once attacked him. The boy retaliated by striking the patient over the head with a rake, thus inflicting a severe

wound over the left parietal region. The boy wore a hard felt hat at the time, which afforded little protection from the blow. The hat afterwards showed a small hole which had been completely punched out by one of the prongs of the rake.

The case was seen by Dr. Cameron in consultation, on the evening of November 27th. Previous to this Dr. Cleland had treated the wound, syringing it with carbolic acid solution and applying a gauze dressing. Dr. Cameron found a wound about the size of a sixpence near the left parietal prominence, thick pus was oozing from it. There was little swelling or bogginess around the wound, and the discharge from it was not great. There was no motor palsy, the eyes were parallel, the pupils equal; the tongue was protruded straight and readily. He could reply "yes" and "no" appropriately to questions asked; when asked to say anything else he would simply say, ah-ah-ah—yes, and would go through this formula again and again when asked to repeat any word. He could count fingers from one to five. When asked how many fingers on both hands extended before him, he insisted that there were eleven; when asked how many five plus five made, he replied nine, but subsequently said ten. This is curious when considered along with the fact that since his recovery he can count and make such simple additions accurately. Temperature, 100.2°. Pulse, 60. On the day previous the temperature had been slightly over 100°. There had been no vomiting. He attempted to vomit once on the day of the accident, but never since. The symptoms of aphasia did not ap pear until the second day after the accident.

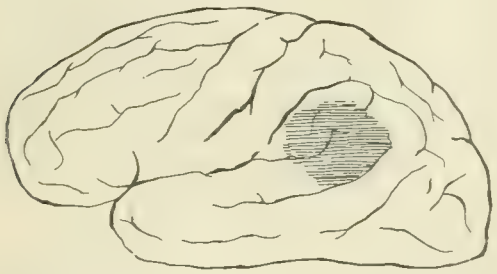
On the evening of November 29th he was admitted to the hospital.

The condition of the patient remained unchanged, except that he apparently became more drowsy, and lay perfectly quiet unless disturbed by someone addressing him. At eight o'clock on the morning of November 30 the temperature was 96°. The operation was performed at 9.30 a.m. An incision was made, beginning one inch behind the scalp wound and carried downwards, forwards and upwards, in the form of a semi-circle, ending one inch in front of the wound, the centre of the incision being three-quarters of an inch below the wound. The flap thus marked out was dissected up along with the periosteum; the hæmorrhage was checked and the injury to the skull investigated. The dura mater was bare over an area about the size of a three penny bit. The superior margin of the hole in the skull, including a piece of bone about one-half inch square, was depressed; the depressed portion consisted of both tables of the bone. Whilst removing some dirt and debris with the forceps, a few drops of thick pus welled out, it had been confined under some degree of tension; a piece of black cloth one-quarter inch square was extracted from the centre of the wound. On attempting to use the trephine, a portion of the superior margin of the opening in the skull was broken off by the pin of the instrument, and removed; a ragged fragment of bone was removed from beneath the inferior margin by means of dissecting forceps. The dura mater was lacerated, but appeared healthy; the depressed fragment of bone was raised; it was not thought necessary to make a more extensive opening in the skull, as there was an opening of considerable size left, exposing the dura mater, after the depressed portion was elevated, thus free drainage was secured. The parts were thoroughly cleansed with 1-2000 perchloride of mercury. The periosteum was drawn together as far as possible; the edges of the skin flap were united by suture; a drainage tube was inserted through the punctured wound, whose edges had been trimmed. The tube was carried within the dura mater. A Keith's dressing of carbolic and glycerine in absorbent wool was applied after dusting with iodoform; over this a gauze pad and a bandage.

The child's condition since the operation has not presented many points of interest. Occasionally a frontal headache was complained of, and, curiously enough, during these attacks the temperature invariably fell to 97° or even 96°. A dose of calomel followed by a saline purge always relieved the condition. During the third week after the operation he became unable to open his mouth except to a very limited extent, and during his efforts to do so his chin became deflected towards the left; this condition lasted for three or four days and then passed off. The child has otherwise made an uninterrupted recovery, the aphasic symptoms have gradually

passed off, and now he is quite bright and intelligent.

By measurement the centre of the wound was midway between the tip of the mastoid process and the sagittal suture, three and a half inches from each point. It was one and three-quarter inches behind a line drawn vertically through the external auditory meatus, and three inches above a line drawn through the same point. The lines suggested by Dr. Reid afford perhaps the most accurate method of localizing cerebral areas. By this means the superficial wound was judged to be situated over the posterior portion of the inferior parietal lobule, just around the posterior extremity of the horizontal limb of the fissure of Sylvius. The area would in all probability be over the junction of the angular gyrus with the supra marginal convolution, and would involve the posterior extremity of the first tempero-sphenoidal convolution. The accompanying tracing represents the probable areas of the brain upon which pressure was exerted.



Remarks on the case: An interesting point in the case is the peculiar form of aphasia which was developed. Clearly the motor centre for speech was not affected. The boy understood perfectly all that was said to him, and was able to count fingers when asked to do so; there was no defect in articulation at all. The injury was some distance from the motor speech centre (viz., the posterior part of the left lowest frontal convolution and the adjacent part of the ascending frontal convolution), and we would have been surprised had it been involved. The idea of sensory aphasia may be suggested; the region of the hinder part of the parietal lobe is probably, according to Gowers, the seat of the higher visual centre, and transient "mind blindness" may be caused by its disease, *i.e.*, an inability to recognize not only words but objects also. Although the injury was apparently in the position which would lead us to expect mind blindness, yet the condition was not present; this was evidenced by the fact that the boy was well able to recognize all objects shown him; he could not voluntarily name them, but invariably assented when the proper name was suggested to him, *e.g.*, a knife or a key; further, as already stated, he could count fingers when extended before him. Another form of sensory aphasia is that known as word deafness, due probably to involvment of the first left tempero-sphenoidal convolution. The position of the injury might again suggest this form. There was not complete word deafness, he could answer questions intelligently by "yes" or "no," and was perfectly conscious as to whether an article was named rightly or wrongly by another. Gowers, however, states that in partial word deafness a condition exists in which there is great difficulty in the voluntary revival of words, especially of the more special words, such as nouns, and this sometimes constitutes the sole defect from the beginning. This describes the condition existing in our patient: he could not voluntarily use special words. This has been ascribed to interruption of the conducting path between the auditory and motor centres, and has been referred to cases of disease of the Island of Reil; it has been called "conduction aphasia." It is possible that the prong of the rake penetrated somewhat deeply into the brain substance, and either inflicted direct injury upon the parts through which the conducting fibres run, or by injury to vessels the blood supply to these parts may have been seriously interfered with and their function thus impaired.

Correspondence.

Editor of CANADIAN PRACTITIONER.

SIR,—No doubt very many of your subscribers have had their attention drawn recently to a lecture, by John Marshall, F.R.C.S., of King's College, etc., London, on Cancer, etc., which appeared in the *British Med. Jour.* of Nov. 23, 1889. The principal point of interest in that lecture to me at least, is the suggestion made as to the etiology of cancer—namely, that the new growth is the result of escape of the epithelial

elements from the control of the nerve fibres regulating their life processes.

In connection with this paper, and particularly with the suggestion above, I think the following facts to be worthy of notice.

In the year 1884, Dr. A. B. McCallum, then Fellow in Biology, Toronto University, while working on the problem of nerve terminations in epithelium, was induced to experiment with cancerous growths from human beings, more especially with squamous-celled epitheliomata. As proven by specimens now in his possession, he was then successful in tracing the ultimate nerve fibrils to a termination within separate cells, and even to the nuclei of cells. His work in tracing out the terminations of nerves in the proper cells of the liver was also quite conclusive.

At the meeting of the Ontario Medical Association, in June 1888, Dr. Hugh McCallum, brother of Dr. A. B. McCallum, read a short paper in retrospect of work done, and advances made in physiology for the past year. Amongst other facts he mentioned the discovery of nerve terminations in epithelial cells by his brother, and he said that from this, we might possibly arrive at the causation of cancer, suggesting that the dislocation of nerve terminals from their connection with epithelial cells, might have something to do with the epithelial overgrowth of the carcinomata.

JOHN CAVEN.

Personal.

THE name of Dr. Price Brown, of Toronto, was inadvertently omitted from our list of the contributors to THE PRACTITIONER for the year 1889, as published in our last issue.

WE are much pleased to know that Dr. T. J. W. Burgess has been appointed medical superintendent of the new Protestant Insane Asylum, of Montreal. Dr. Burgess has been well known as one of the most able and worthy physicians of Ontario. He graduated at the University of Toronto, in 1870, when he was awarded the Starr gold medal, and the University silver medal. After spending three years as surgeon to her Majesty's North American Boundary Commission, he commenced work in an asylum for insane, as assistant to Dr. Workman, of Toronto. During the last few years he has been in the Hamilton asylum. His many friends will wish him success in his new sphere in Montreal.

Births, Marriages and Deaths.

MARRIAGES.

IANSON—ROGERS—At the residence of the bride's father, 107 Avenue Road, Toronto, on the 26th inst., after the Order of the Society of Friends, Dr. Wm. Ianson, of Ottawa, to Sarah R., daughter of Samuel and Achsah Rogers.

SISLEY—MCMILLAN—On Christmas day, at St. James' Square Presbyterian church, by Rev. Dr. Kellogg, O. Sisley, M.D., of Ellesmere (and formerly of Toronto), to Miss Sadie McMillan, of this city.

DEATHS.

HUNTER.—At Ogden, Utah Territory, Dr. J. B. Hunter, of Detroit, on December 31st, youngest son of the late James Hunter, of Saint George, and brother of Doctor John Hunter, Dovercourt road, Toronto.

Obituary.

DR. HORACE P. YEOMANS.

It was a great shock to the many friends of Dr. H. P. Yeomans to hear of his death at his home in Mount Forest, December 22nd, at the age of 49. On the evening of the 19th he was seized with apoplexy, and was never conscious afterwards. He was a graduate in arts and medicine of the University of Queen's College, taking the degree of M.D. in 1863. He was a man of more than ordinary ability, education, and culture, and was highly respected by the profession generally, and greatly loved by those who knew him intimately. He was a member of the Provincial Board of Health since its formation seven years ago.

At Nordhausen, in Prussian Saxony, the municipal authorities, at the suggestion of the district medical officer, require barbers and hairdressers to disinfect their instruments each time they have been used.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

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Business Management. - - THE J. L. BRYANT COMPANY, LIMITED, 58 Bay Street.

TORONTO, JANUARY 16, 1890.

OPENING OF THE NEW BUILDING OF THE BIOLOGICAL DEPARTMENT, UNIVERSITY OF TORONTO, DECEMBER 19, 1889.

ADDRESSES BY THE PRESIDENT, THE MINISTER OF EDUCATION, PROF. RAMSAY WRIGHT, PROF. OSLER, PROF. WELCH, AND PROF. MINOT.

Sir Daniel Wilson, who was received with applause, said,—It is my pleasant duty to-day to welcome those who join with us in the public opening of these Biological Buildings. It is a very important step, I feel assured, in the history of the advancement of science in our Province and Dominion. It is an index of our share and sympathy in the progress that peculiarly marks the century that is now hastening to its last decade. From the age of the Renaissance this progress has been gradually achieving successive triumphs. That great change which is known familiarly as the renaissance, or new birth, was unquestionably a revolt against mediæval thought, and the grand claim of absolute freedom of research into all truths, of the right to accept of every manifestation of truth that science may reveal to us. Copernicus, Kepler, Galileo, and other great names, have been succeeded by those of men who have advanced step by step into the higher mysteries of science; and last of all we have had in our own day a great thinker in the department of biology, one who has revolutionized thought, and prepared the way for an entirely new advance in the research for truth. I feel nevertheless bound, for myself, to affirm that I cannot accept the doctrine of evolution in so far as it assumes, under certain teachers, that mind and thought, intellect, reason, and all upon which our moral sense and the conception of a future life are based, can be conceived of as a mere production of evolution. Nevertheless as students of science, we are bound to sit humbly at the feet of truth. Whatever truths are disclosed to us in the triumphs of science, however for the time being they may seem irreconcilable with other truths, we need have no hesitation in the assurance that one truth cannot conflict with another.

I rejoice in the ample provision that is now in progress for all the departments of science in connection with this University. These buildings furnish somewhat adequate accommodation for the biological and physiological sections of university training; and I welcome the recent addition to our faculty of one who is a specialist in psychology. I have only to add that already contracts have been accepted for a further extension of these buildings; and when the entire plan is carried out it will furnish accommodation for the other branches of science which we recognize as playing an important part in our Faculty of Arts. It is, therefore, with peculiar satisfaction that I now perform the pleasing duty of proclaiming the building dedicated by the University to the use of the biological department of science, open, and devoted to all the special purposes for which it has been constructed.

Hon. G. W. Ross said that when he was asked to attend the opening exercises of this department of university work he expected that he would not be called upon to take any part but to have the unalloyed pleasure of listening to the other speakers and witnessing the enthusiasm of the students. He could only say at the outset that he was delighted to notice the onward progress of the University of Toronto, and the enlarged facilities which were being provided from time to time in the various departments of thought germane to every well-equipped university. He need not indicate the steps of progress taken within the past few years. They were all familiar with that progress. They had in this building, just declared open, clear evidence that the Senate of the University of Toronto, that those concerned in its success, are determined that at least on the side of the natural sciences, they shall not be behind any other university on this continent. He was glad to hear from the President that the intention is to prosecute the good work further. Last session authority was given the trustees for $60,000 for the promotion and completion of this department, and he supposed next session further authority would be asked to bring within a convenient centre or within convenient access of each other, all the departments in which the students of natural science were interested. He was pleased to hear from Prof. Wright that the classes here were among the largest in any department of university work. Everybody knew the enthusiasm with which Prof. Wright entered upon his work. He welcomed Prof. Osler, who was a graduate of the University of Toronto. He was one of their own people, a Canadian by birth and education, and he supposed he went to America either by choice or by necessity. Probably by choice. They were proud of Prof. Osler, first because he was a Canadian, second because he had been a successful Canadian, and third because he was a distinguished Canadian. He congratulated the President upon the evidence of expansion of the University, and he congratulated the vice-chancellor for the devotion which he had shown in every department of university work.

Sir Daniel Wilson congratulated Prof. Ramsay Wright on his admirably equipped building and alluded in comlimentary terms to his ability for teaching. The president then called on Prof. Wright to deliver his opening address.

THE PATHOGENIC SPOROZOA.

BY RAMSAY WRIGHT, M.A., B.SC.,
Professor of Biology, University of Toronto.

In the course of some introductory remarks, Prof. Wright spoke of the stimulus to the various branches of biological study which he was confident would be given by the erection of the commodious and well-equipped building devoted to his department. He referred to the constant interest shown by the University authorities, and especially by Vice-Chancellor Mulock, in the progress of the work, and expressed the hope that the progress already made would lead to a symmetrical development of all the divisions of biological science in the University. Addressing an audience largely composed of practitioners of medicine, he referred to the circumstance that the youngest of the branches of special study in biology—that of bacteriology—is that which at present has the greatest interest for them. He had selected for discussion to-day, however, the biology of certain low forms of animal life—the Sporozoa—which, he said, were destined to attract the close attention of pathologists within the next few years.

The Sporozoa are a group of low forms of animal life, belonging to the sub-kingdom Protozoa, which, in consequence of the universal adoption of a parasitic mode of life, present certain peculiarities of structure and reproduction which mark them off quite sharply from the rest of the sub-kingdom. The structural peculiarities consist chiefly in the absence of any specialized organs for locomotion or the ingestion of food, while the reproductive peculiarities consist in the formation of large numbers of characteristic spores. It is to these that the group owes its class name, Sporozoa, given to it by Leuckart, who in addition to his invaluable services in familiarising us with the structure and life-history of the higher parasites, has made most important contributions to our knowledge of these lower forms. All of them are unicellular animals, which may occasionally be so large as to be visible to the naked eye, but are often—especially those interesting in human pathology—quite microscopic. Four orders are distinguished, (1) Gregarinidia, (2)

Sarcosporidia, (3) Myxosporidia, (4) Microsporidia ; these may be shortly characterized before dealing with the forms of special interest to the medical practitioner.

1. The first Order, that of the Gregarinidia, is best known as furnishing the minute vermiform intestinal parasites of insects and other invertebrates. The unicellular nature is obvious in those which are known as *Monocystidea* (Fig. 1a), but masked in the *Polycystidea*, in which the cell shows a tendency towards subporary character, being discarded before the Gregarine enters into conjugation (Fig. 1c) The result of such conjugation is the fusion of the two cells within a single cyst, and is the general precursor in the intestinal Gregarines of sporulation, which consists in the segmentation of the protoplasmic mass from the periphery inwards (Fig. 1d) into globular clumps of protoplasm, each of which eventually gives rise to a spore with a resistent shell of characteristic form (Fig. 1e and f) ; such spores, from a fancied re-

FIG. 1. DEVELOPMENT OF GREGARINE

a, A Monocystid Gregarina ; b, a Polycystid Gregarina, two individuals of the latter, which have cast off their epimerites and become free, the posterior cyst containing the spores and protoplasmic residue of the cells belonging to segments cast off ; the spores each consisting of a cell in its hard shell, the protoplasm of which is segmented ; f, a single spore more magnified, the contents segmented into sickle-shaped germs ; h, a young individual of the resistent generation ; k, a pair of the latter in conjugation ; l, a young adult gregarina-form by same, while still adhering to epithelial cell by epimerite.

division into different regions. In all, however, the structure is substantialiy the same, the protoplasm surrounding the nucleus admitting of the recognition of two regions, the granular endoplasma and the hyaline ectoplasma, the latter the seat of the contractions which lead to the vermiform movements of the body. The cuticle through which the nourishment is absorbed, is frequently provided with an apparatus of attachment (Fig. 1b), but this may be of a tem

semblance in form to the minute hard-shelled diatoms, used to be called *Pseudonavicellæ*. The spore-cases are voided through the intestine of the host, and the spores escape either through the rupture of the cyst or by special ducts, and are protected by their hard shells till they reach favourable conditions for further development. This consists in the segmentation of the contents of each spore into two or more sickle-shaped or crescentic germs (Fig. 1g), which are

capable of change of form, and probably in most cases of active penetration into the intestinal epithelial cells of a new host (Fig. 1h), which cells they leave after having attained the adult form (Fig. 1k). The above is a sketch of the life-history of a typical intestinal Gregarine from an insect; to the same order, however, there also belong forms, which unlike the preceding have a long intracellular life, and a short free life, and it will be necessary to return specially to these as they are the forms most interesting in human pathology.

2. The second order, Sarcosporidia, receives its name from the circumstance that the organisms in question are generally found in the muscular tissues of vertebrates. They are the tubes of Miescher or Rainey, which have long been known (Fig 2a) from the flesh of the hog, sheep and other animals, but which may be present in considerable numbers without apparently affecting the health of their host. When present in large numbers, however, they may give rise to various symptoms, according to the group of muscles—lumbar, diaphragmatic or cardiac—most involved. It has been suggested by Pfeiffer that the acute Polymyositis described by Unverricht and others is due to invasion by Sarcosporidia, but this has not been definitely proved. The tubes grow at the expense of the muscular fibres, and present within the porous cuticle which limits them, globular cysts in different stages of development, the ripe ones of which are full of crescentic bodies, which recall the crescents of the Gregarines, and are probably the means by which the parasites spread to other fibres. The Sarcosporidia are not confined to muscle-fibre, for they occur in the connective-tissue of the œsophagus of the sheep, forming there tumours of considerable size, which may entail various pathological consequences.

3. The Myxosporidia in their adult condition have the least regularity of form of any of the Sporozoa (Fig. 2 b.) They are found on the skin and mucous membranes of aquatic vertebrates, and like the last group are generally observed to be full of spores. These are unlike those of preceding groups, in that they are provided with projectile threads (Fig. 2 b & c) possibly a provision for attachment to a new host.

4. The Microsporidia, finally, include extremely minute Sporozoa, the spores of which (Fig 2 d) are so small that they have been taken for bacteria. They occur as parasites of the tissue elements of insects, and in the form of the pebrine of the silk-worm have led to enormous losses in silk-culture in Europe. M. de Quatrefages calculated that in the first thirteen years after the outbreak of pebrine, France lost two hundred million dollars from the ravages of this sporozoon. They are not confined to any particular kind of cell but invade and destroy all without exception.

We must now return to those forms which belong to the first order, but which differ from the type described, in that their life is chiefly an intracellular parasitic life, a short free or wandering stage, however, permitting the young forms to invade new cells or new hosts. They are generally known as Coccidia, and like the Sarcosporidia and Microsporidia are true cell-parasites. The best known is *Coccidium oviforme* from the liver of the rabbit. It occurs in caseous nodules and cysts of the liver, which are full of the parasites in their encapsuled stage (so called psorosperms, Fig. 2 e.) Sporulation does not occur within the host, but has been studied outside, and recognised to result in the formation of two crescentic germs within each of four spores. It is supposed that the cysts, which have been voided from the intestine of one infected animal, may after sporulation be introduced with the food into the intestine of a new host, the crescentic germs being eventually freed and thus ready to penetrate the epithelial cells of the bile-ducts (Fig. 2, e 5) the contents of which they devour before again undergoing encystation.

Several cases in which man has been attacked by the same parasite are recorded—a particularly interesting one is that described by Gubler, who diagnosed hydatid tumours of the liver. The patient died, and some twenty cysts full of coccidia were found, one six inches in diameter! There is little doubt but that cysts of this nature, full of caseous material, have often been misinterpreted in the past, and closer attention in the future may establish that such psorospermosis of the liver is not so rare as has been supposed.

A large number of similar forms are known in other vertebrates and invertebrates attacking the cells of the intestinal tract and its append-

ages. One of the most interesting recently described is the *Karyophagus salamandræ* of Steinhaus (fig. 2f), which invades the nuclei of the intestinal epithelium of the salamander, and only becomes free within the cell after all the nuclear matter has been devoured.

A similar nuclear parasite is asserted by Podwyssozki to occur in certain diseases of the liver in man, and a detailed description of these is promised shortly. The parasites, which he proposes to call *Karyophagus hominis*, first produce a hypertrophy of the invaded nuclei of the liver-cells, then distort them, and, after encystation and sporulation, finally cause the pigmentary atrophy and disappearance of the whole cells. Such destruction of the liver-cells as well as the irritating effect on the intra- and inter-lobular connective tissue caused by the presence of the coccidia may lead to cirrhosis and icterus. Podwyssozki calls attention to the ease with which the structures may be confounded with normal elements, expressly stating that they may easily be overlooked by an experienced histologist, and remarks that many of the so-called accessory nuclei, plasmomes, etc., described as normal cell-elements, may really be developmental stages of coccidia. It is obvious that the close cystological studies of the present day have prepared the way for researches into this difficult field of investigation

In adition to the above described cases in which the epithelium of the digestive tract is

FIG. 2. ILLUSTRATING VARIOUS PATHOGENIC SPOROZOA.

a, A voluntary muscle-fibre from the œsophagus of the sheep containing a tubular Sarcosporid; within the tubes are cysts in different stages of development, the ripe ones (a1) containing numerous crescentic bodies; b, a Myxosporid from the bladder of the pike, (b1), one of its spores with terminal thread-cells; c, a spore from another species with projected threads; d, yolk-cell from the egg of silk-moth infested with microsporid cysts; below is represented one of the oval spores contained in these and the amœboid germs with emerge from such spores; e, *Coccidium oviformis* from the liver of the rabbit, in encysted stage; e1, e2, contents of cysts segmenting; e3, spores; e4, one of the spores enlarged containing two crescentic germs; e5; f, epithelial cell from the kidney of the rabbit invaded by a coccidium; f, intestinal epithelial cell from the salamander, the nucleus of which is invaded by a coccidium (*Karyophagus* of Steinhaus), f1, a similar nucleus almost entirely replaced by the invading coccidium; f2, the coccidium undergoing direct division into segments; g, epithelial cells from the mouth of the pigeon after Pfeiffer, with coccidia in different stages of development, some encysted with encysted results; g1, results showing amœboid movements; g 2, adopting "flagellate" form on mucous membrane; h, four epidermal cells from *molluscum contagiosum* after Neisser, to the left is a cell, h1, with the contained coccidium in its protoplasmic phase, h2, segmentation into angular refractive bodies follows, which eventually emerge as cysts (now known as spores), each of these, on their entrance, disappearing and the sarcode body giving rise to the characteristic molluscum corpuscle. h3; k, epidermal cell from a case of Paget's disease of the nipple after Darier, in which a coccidium pushes aside and distorts the nucleus; l, epithelial cell from Paget's disease of the nipple after Butlin, the contained coccidium interpreted by him as an instance of endogenous cell-formation.

attacked by coccidia, instances are not wanting where it is the epidermal cells of the skin which are invaded. Pfeiffer has given us a detailed account of the forms which cause a contagious skin disease in poultry, and which were originally described by Bollinger in 1873. The cells are invaded by the coccidia and the nuclei thrust aside as the parasite grows and proceeds to sporulation (Fig .2 g). The spores 'are at once capable of propagating the disease, which therefore may be artificially produced by inoculation, and, indeed, if planted on the mucous membrane of the throat, instead of on the skin, the spores take on a "flagellate" instead of an amœboid form, but penetrate the epithelial cells and give rise to a diphtheritic condition which is very contagious among the poultry exposed to infection. Such polymorphism on the part of these spores is of great interest in view of the remarkable, and as yet only partly understood, polymorphism of the malarial parasite.

On the first discovery of this disease of poultry Bollinger compared it to "molluscum contagiosum" in man, and Neisser has recently shown (Vierteljahresschrift fuer Dermatologie und Syphilis) that this disease is really due to the invasion of the cells of the malpighian layer of the epidermis by coccidia. It has nothing to do with the sebaceous glands, but in the interpapillary colums of the rete mucosum all stages of the development of the parasite may be seen, from cells which are just invaded, to those in which the nucleus is thrust aside and the cell-protoplasm entirely replaced by the parasite (Fig. 2h). Sporulation occurs within the cell, 6, 8, or 10 refractive bodies being formed, these increase in size, so as to exercise mutual pressure, and the typical "Molluscum-corpuscle" is arrived at by cornification of the remains of the invaded cell around the coccidium-cyst. The contagious character is thus satisfactorily explained.

Molluscum is, however, not the only human skin-disease which must be attributed to coccidia. Darier has recently established the fact that certain conditions described heretofore as a variety of *acne cornea* or as *keratosis follicularis* are in reality a "psorospermosis follicularis," (Annales de Dermatologie et Syphilis July 1889). In these conditions the lesion exists in the necks of the sebaceous follicles, which are dilated into a cup or funnel shape, the funnel being occupied by a mass of corneous appearance which projects beyond the level of the epidermis in the form of a brownish or greyish crust. This is formed as a result of the irritation of the cells of the neck of the follicle by coccidia which have invaded them (Fig. 2k). Instead of the lesion being limited as described, the sebaceous gland and the hair-follicle being unaffected, vegetations may be developed from the neck of the follicle, and extend into the adjacent corium, giving rise to tumours which were observed chiefly in the inguinal region. Microscopic preparations of such tumours, Darier says, would be infallibly diagnosed as coming from an epithelioma of follicular origin, for the cells dispose themselves round central invaded cells in "nests" of the form characteristic for epithelioma.

A still more interesting, because more commonly observed condition, shown by Darier to be attributable to the invasion of the epidermis by coccidia, is that known as Paget's disease, "chro ic eczema of the nipple," recognized by Paget as a frequent precursor of cancer of the breast.

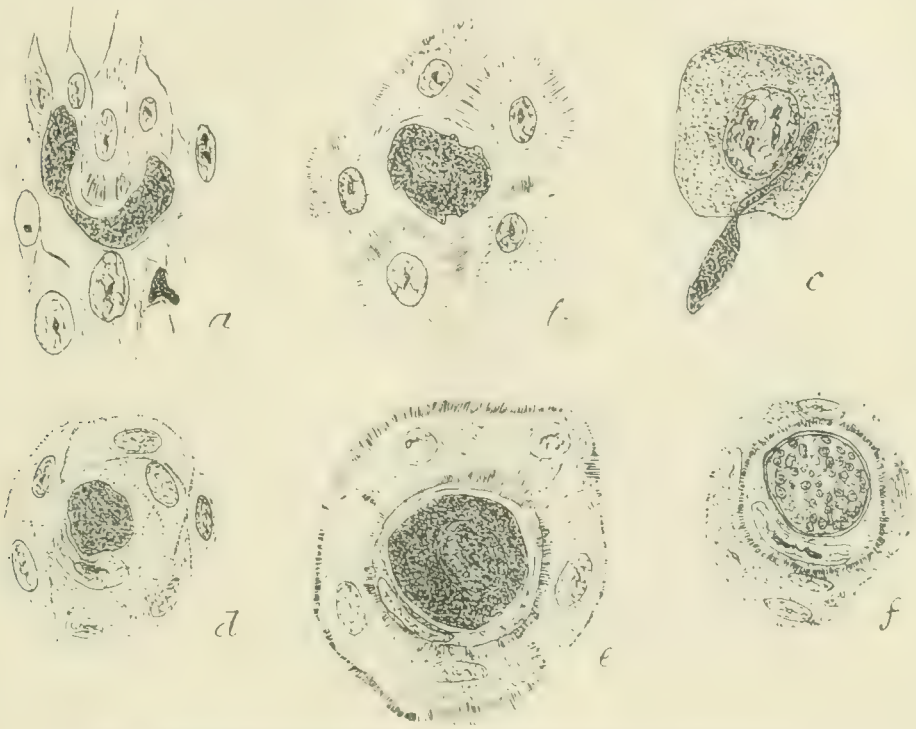
Although it is not difficult to differentiate this condition from eczema, yet the presence of the coccidia in the epithelial cells of the deep as well as the superficial layers furnishes, according to Darier, an infallible distinction. These bodies had been noticed by Butlin (Medico-Chirurgical Transactions, 1877), who described the ducts and acini as full of epithelial cells of this character, supposed by him to be undergoing endogenous cell-formation (Fig. 2 l). Darier shows, however, that these are coccidia, which, when they attain their full size, distend the invaded cell beyond its normal dimensions and (unlike the coccidia of the psorospermosis referred to above) sporulate in situ.

The conclusion is at once suggested that the cancer which succeeds this condition is simply due to an inward extension through the galactophorous ducts, and Darier does not fail to draw it.

Darier's account of the two pathological conditions referred to above, presented in the Spring of 1889 before the Société Biologique of

Paris, elicited from M. Malassez the statement that in his belief coccidia are a more important factor in disease than has hitherto been admitted, that since 1876 he has regarded certain intracellular bodies met with in the central cells of nests in epithelioma as coccidia, and that four years ago he had showed these to Balbiani—the most distinguished French authority on Sporozoa—who had confirmed him in his belief. M. Albarran followed with a detailed description of these structures from nests, and others extend into the connective tissue.

Many observers have been struck by these globular elements in the centre of the epithelial cell-nests, retaining their protoplasm while the surrounding cells cornify. They have generally been considered as the result of a mucous or colloid degeneration of the central cell, but it is not only in France that these have been interpreted as coccidia. Pfeiffer in one of his papers on the Sporozoa (Zeitschrift fuer Hygiene, III.)



DRAWINGS FROM PREPARATIONS OF EPITHELIOMATA, DRAWN BY DR. A. B. MACALLUM.

a, b, and c are from preparations made with chromic acid, haematoxylin, and eosin, and d and f from preparations made with corrosive sublimate, gold chloride, and eosin, showing a migrating plasmodium, the former stained with general protoplasm; near letter a is represented a leucocyte, showing protoplasm between the prickle-cells and possessing apparently a nuclear body; c, showing a plasmodium, the nucleus of an epithelial cell, plasmodium in an epithelial cell, around which the other epithelial cells are attenuated, resulting in the formation of a cyst; d, plasmodium in the cell, the nucleus in the cell is pushed to one side and partially disintegrated by the plasmodium; e, a further stage of the above, the nucleus in the cell is pushed to one side and partially disintegrated by the plasmodium; e, a further stage of the above, the nucleus and remaining protoplasm of the cell forms merely an envelope for the plasmodium, which is intensely eosinophilous, and which possesses apparently a nucleus; f, a stage following an epithelial cell with the nucleus pushed to one side and crescentic in form, the protoplasm disintegrated, the plasmodium surrounded by a cyst wall; all stained with iron haematoxylin, and apparently having undergone sporulation.

two cases of epithelioma. The foreign bodies in the epithelial cells are rounded or oval elements of a faint yellowish-green tinge with granular protoplasm and a central nucleus or entirely homogeneous. Occasionally they are in the form of cysts, and in some individuals six to eight refractive corpuscles of rounded or irregular form are to be seen. Occasionally the invaded cells are surrounded by one or two flattened cells; others occupy the centre of

refers to the case of a girl of fifteen, who died of general carcinosis, the growths in the breast and mesentery exhibiting coccidia both in the protoplasmic and sporulating phases. On the other hand, Neisser, in his paper on Molluscum specially contrasts carcinoma with molluscum or epithelioma contagiosum, and adheres to Cohnheim's view of its etiology.

Entirely independently of these observations (which indeed have only been published within

the last few months) Dr. A. B. Macallum, who is in charge of the Histological classes in this Institution, showed me four years ago, sporulating cysts in epithelioma, and suggested the parasitic origin of the disease. You will have an opportunity of inspecting these preparations (Fig. 3), as well as others prepared by Dr. Caven, showing the presence of the same bodies in metastatic growths. They are apparently similar structures to those observed by Malassez and Pfeiffer, and probably also to those described by Thoma (*Fortschritte der Medicin*, 1889, No. 11), although the latter observer finds the parasite generally within the nuclei, and only occasionally in a cavity of the cytoplasma beside the nucleus. The optical characters of the protoplasmic bodies described, their staining reactions and their sporulation would seem to indicate that the structures are the same.

It is hardly necessary to point out the importance of these investigations as to the etiology of cancer, and their far-reaching consequences. Scheurlein's bacillus of cancer has turned out on examination to have nothing to do with the disease, but the analogy of the other diseases referred to above, seems to indicate that at last pathologists are on the road to discover the real materies morbi.

It is not only the epithelium of the skin and the digestive tract which may harbour Sporozoa; possibly the most interesting of all are those forms which invade the blood-cells and by the disintegration of these, lead to serious disease. Not much is known of the lesions produced by the presence of these blood-parasites except in man, and they have been observed in animals apparently quite normal. Whether this is the case remains for further investigation, but the observations of Danilewsky show that it is especially in sickly individuals of turtles and birds that the hæmogregarines described by him are to be found.

The earliest known forms of these blood-parasites are the *Drepanidium ranarum* of the frog, which is known in an intracellular crescentic phase, and in a free phase (Fig. 4 a) and the larger *Trypanosoma* or *Trichomonas*, a flagellate form with an undulating membrane found free in the plasma (Fig. 4 c). A similar Trichomomas is observed in the blood of various fishes, and still another species from apparently healthy rats, while in the blood of mules in India suffering from an epidemic pernicious anæmia—the so-called Surra-disease—entirely similar forms have been found. Whether the flagellate forms are really referable to the group of the Sporozoa remains yet to be determined, but Danilewsky's observations would appear to point out a very considerable polymorphism on the part of these hæmogregarinids, and would seem to support suggestions made that the organisms found in the blood in relapsing fever and pernicious anæmia may also be referable to this remarkable group. The comparative parasitology of the blood is yet in its infancy; there can be no doubt, however, but that a systematic study of the blood in other vertebrates in this regard, will help materially to clear up many obscure points as to the etiology of various human blood-diseases, and especially of malaria, on which Professor Osler is now to address you.

It has been my object in this address to emphasize the fact that not only bacteria, but low forms of animal life furnish important pathogenic organisms, and that continued comparative researches on the whole group of the Sporozoa are required to fill up the gaps in our knowledge of those forms which are pathogenic to man.

THE ETIOLOGY OF MALARIA.

BY WM. OSLER, M.D., F.R.C.P.,
Professor of Medicine, Johns Hopkins University

During the early triumphs of bacteriology it was confidently anticipated that malaria would turn out to be a bacterial disease, and the *Bacillus malariæ* of Tommasi-Crudelli and Klebs was generally thought to be the looked-for micro-organism. The discovery by Laveran of amœboid bodies in the interior of the blood-cells was at first considered as pointing to phenomena of degeneration of these, and the original descriptions of the organisms seemed rather to indicate a retrograde step in the study of pathogenic micro-organisms. Since then, however, independent and renewed observations by Marchiafava, Celli, Guarneri and Golgi in Italy, by Councilman, James, and myself in America, and by Vandyke Carter in India, all point to the conclusion that Laveran's organisms are the real cause of the condition, at least that

they are peculiar to and diagnostic of the malarial poison.

Laveran's organisms resemble the Sporozoa, which have formed the subject of the preceding address, in their having an active amœboid phase, and a sporulating phase. The latter occurs apparently without encystation, and the resulting spores exhibit either amœboid or flagellate locomotion. Certain resting-stages—the so-called crescents—do not, however, appear to be comparable to the crescentic germs of the coccidia.

The amœboid bodies, *Plasmodium malariæ*, as they are now called, are to be found within the blood-cells of the acute cases of malaria, and exhibit a different stage of evolution according to the phase of the attack. During the apyrexia the plasmodia are to be recognized as minute, colorless amœboid bodies (Fig. 4) which gradually grow at the expense of the stroma of the red blood-cells, and become more and more loaded with fragments of black-pigment—melanin—the result of the digestion of the hæmoglobin. Eventually the whole of the stroma is devoured, the plasmodium assumes a globular form, the pigment generally accumulates at the centre, and the peripheral protoplasm segments into a number of young plasmodia, which are free from pigment and are capable of amœboid, more rarely of flagellate, movement. This segmentation is coincident with the chill. After the attack the resulting small plasmodia may leave the larger vessels to crowd into the capillaries of the spleen, etc., where the central lifeless pigment masses are taken up by the leucocytes, but they are soon found within the blood-cells in the general circulation again. The length of time from the invasion of the blood-cells to the occurrence of segmentation determines the character of the fever, and Golgi believes he has made out specific distinctions between the plasmodium of tertian and quartan fevers (Fig. 4 o, p). The relationship of the intra- and extracellular crescents (Fig. 4, m) of chronic cases to the plasmodium has not yet been satisfactorily made out, but it may be noted that, while quinine at once causes the disappearance of the ordinary plasmodium from the blood, the crescents are on the other hand quite refractory thereto.

FIG. 4. [illegible] Blood-Cell Parasites.

a, Red blood-cell containing two crescents of *Oscillaria malariæ*; a', a crescent escaping; a², a free crescent. b, *Tri chomonas* from fish's blood; c, from frog's blood—two phases, the successive phases of development of *Plasmodium malariæ* within human red blood-cells; k, segmentation in the rosette form with central pigment; l, free segments which may be amœboid or flagellate; n o, plasmodium of tertian; p, that of quartan ague, after Golgi.

Flagellated forms with three or more rapidly moving lashes are to be met with in some cases, especially in the blood from the spleen, and these have been observed to be developed from the free oval or rounded bodies. Nothing so far can be said as to their significance.

We must await the further working out of the life-history of the *plasmodium malariæ* till its zoological position and its causal relationship to the disease can be more thoroughly defined, in the meantime it is necessary to call attention to its great importance in diagnosis. Little difficulty is experienced in recognizing the ordinary cases of intermittent fever; it is in the chronic and anomalous cases which sometimes simulate typhoid, that the blood-examination is of most service. The finger-tip must be thoroughly cleansed before taking from it the drop of blood which is to be examined, and a very thin layer of blood must be taken so that the cells shall not run into rouleaux.

The detection of the smaller plasmodia within the blood-cells requires a high power—preferably a $\frac{1}{12}$ homogeneous immersion, and good artificial illumination, but the extracellular crescents in the chronic cases can be observed with a $\frac{1}{6}$. Seven out of twenty-four cases of malaria recently admitted into the Johns Hopkins Hospital could not have been satisfactorily diagnosed without the blood-examination. In subtropical and tropical practice especially is this new method of diagnosis likely to be of great service.

Professor Osler concluded as follows :—When I look back a few years and think of the appliances and arrangements which we had then in Toronto, and when I go over this building and see the beautiful arrangements, the elaborate apparatus, the splendid appliances for teaching, I feel that it is possible for one to live through a renaissance, similar perhaps in kind, less important in degree, than that to which the president referred in his opening remarks. As most of you know, I have continued to take an interest in the school in which I received my early instructions, and I continue to take a deep interest in everything relating to the profession in this my native Province. Though I am away a considerable part of the time, yet I am able to make repeated visits, and it is always a source of the greatest pleasure to meet my old teachers and my colleagues and my friends.

An address delivered by Prof. Vaughan, of the University of Michigan, at the opening of the Biological Department of Toronto University, will appear in our next issue.

PATHOLOGY IN ITS RELATIONS TO GENERAL BIOLOGY.

BY WILLIAM H. WELCH, M.D.,

Professor of Pathology, Johns Hopkins University, Baltimore.

I esteem it a privilege to assist at the formal opening of this Biological Laboratory and to be able to extend to this University, and to this City, congratulations for the possession of a laboratory so admirably constructed and equipped and inaugurated with the assurance of an activity so fruitful and well directed. The existence in this place of such a laboratory is not a matter of local pride alone. It may safely be predicted that its influence will be felt throughout this country, and indeed wherever interest in the biological sciences is found.

With such opportunities as here exist, we may feel assured that this country will increase and expand the honorable reputation already gained by its contributions to biological knowledge.

Biology in its widest significance is the study of life in all its forms and activities, both normal and abnormal. No branch of human knowledge can exceed this in interest and importance; none has made greater advances during this century of scientific progress; none has achieved greater triumph for human welfare; none has influenced more profoundly modern philosophical thought.

I am here to say a few words concerning one department of biology, namely, pathology, particularly in its relations to general biology.

Pathology is the study of life in its abnormal forms and activities. The relations of pathology to practical medicine are necessarily so essential and intimate, that the broader conception of this science as a part of biology is in danger of being lost from view. I deem it, however, important for the scientific status and advancement of pathology to keep in mind and to emphasize its relations to general biology, not less than those to practical medicine.

In so doing, it is not intended to detract in any degree from the practical value of pathology and its applications to the diagnosis and treatment of disease. When we consider that pathology embraces the investigation of the causes of disease, of the anatomical changes produced by disease in the organs and tissues

of the body, and of the alterations in function resulting from disease, it is plain that pathology must constitute the scientific basis of practical medicine. This is not the less true because the prevention and cure of disease have not kept pace with the advances in our knowledge of the nature and causes of disease, and of necessity can not do so. Preventive and curative medicine, however, is constantly making beneficient application of pathological discoveries, and the most intelligent and efficient management of disease is becoming more and more that which is founded upon the most accurate knowledge of its nature and causes.

Inasmuch as the general public naturally interests itself but little in any side of medicine other than the treatment of disease, there is not sufficient general appreciation of the immense progress in the science and art of medicine of to-day as contrasted with that of a half century ago. The history of medicine is in large part the history of schools of doctrine. Stately superstructures of sweeping generalizations and attempted explanations were erected only to be overthrown because it was impossible to build upon a firm foundation of facts. To-day it is our conviction that these fundamental facts can be discovered in no other way than by observation and experiment. The adoption of this, the only scientific method of investigation, has with the aid of modern instruments and devices not only greatly enriched medical science, but it has overthrown the era in which, among scientific physicians, exclusive schools of doctrine can prevail. The scientific physician, no more than the scientific chemist, can yield adherence to any exclusive dogma. To the one as to the other no way which leads to truth is debarred.

By way of illustration of the achievements of modern pathology, permit me to contrast for a moment with the imperfect, meagre, and confusing information of former times, the fulness of our present knowledge concerning that disease, which of all diseases is the greatest scourge of the human race. Tuberculosis causes the death of not less than one-seventh, and, in some form or other and at some period, affects probably one-third of mankind. But a few years ago, not only was the specific cause of tuberculosis unknown, but there was no general appreciation of the fundamental fact that this is one of the infectious diseases. The knowledge of the frequency and wide distribution of tuberculous disease in other parts of the body than in the lungs is an acquisition of modern pathology. The pathological anatomy of tuberculosis, which not long ago was one of the most confusing chapters in pathology, has been made clear. The unity of all the processes now known to be tuberculous, can be established on an anatomical as well as on an etiological basis. The greatest addition to our knowledge of tuberculosis, and in fact one of the greatest achievements of modern science, is the discovery of the specific living germ which causes tuberculosis. We are now enabled to study both within and without the body, the form and the properties of this germ, the conditions which are favorable and those which are hostile to its preservation and development. Who can doubt that all this increased knowledge of the most devastating of maladies is destined to help in prevention and treatment? Sanitarians convinced of the preventability of tuberculosis have already begun the warfare against its spread.

If one seeks an illustration of immediate practical results of the modern investigations of the living germs which cause disease, let him turn his attention to the revolution thereby wrought in surgical procedures. The possibility which is now in the hands of the surgeon of keeping wounds free from all external infection, is a boon to humanity not less than the introduction of vaccination.

It would be pleasant to follow still further the practical benefits resulting from pathological discoveries, but it is not my intention on this occasion to dwell upon the applications of pathology to practical medicine. I have said enough to remove any misapprehension as to my belief that pathology should be made to serve the ultimate aim of medical education, the prevention and cure of disease. This science must ever hold a foremost place in any proper scheme of medical education.

This occasion is an appropriate one to emphasize especially those scientific aspects of pathology which give it an important position among the biological sciences.

In the first place I claim that pathology as a

science, quite independently of any practical or useful applications whatever, is as legitimate and worthy an object of pursuit as any of the natural sciences. In and for itself alone it deserves to be studied. Its methods are those of observation and experiment as in other biological sciences. Its subject matter is any living thing which deviates from the normal condition. It is not less interesting and important to learn the nature and causes of abnormalities in form and function than it is to become familiar with the normal, and when this knowledge may aid in the prevention and relief of suffering, added dignity and interest are imparted to the study.

As there comes a line where the distinction between the normal and the abnormal is shadowy and uncertain, so the separation between normal and pathological biology is not sharp. The province of the one encroaches at many points upon that of the other. Mutual aid is to be derived from a closer union between normal and pathological biology. The pathologist should not be content with methods of research less perfect than those employed in normal biology. He should not rest satisfied with results which stop at the mere description and classification of morbid processes. To be able to give a name to some pathological lesion, and to make it fit into some accepted scheme of classification, should not be the sole aim of pathological study. Pathological processes should be studied with the aim of elucidating their real nature, development and causes, their mutual relations and their dependence upon underlying laws. The purely descriptive phase of development of any natural science can be only temporary and unsatisfactory. The more a pathologist is imbued with the spirit of modern biology, the less content will he be to stop at this descriptive phase.

In the next place it can be justly claimed that the study of pathology as a science without immediate reference to practical results is in reality the method which is most likely to yield these results as well as to bear fruit in other directions. Experience has shown that the most important discoveries in science, come not from those who make utility their guiding principle, but from the investigators of truth for its own sake, wherever and however they can attain it. It is short sighted to fail to see that the surest way to advance pathology, even in its relations to practical medicine, is to cultivate it as a science from all points of view. It is impossible to foresee what may be the practical application to-morrow of any pathological fact discovered in the laboratory, no matter how remote from practical bearing it may seem to-day.

The experiments upon animals and other investigations which have led to the present accuracy in the localized diagnosis of lesions of the central nervous system, and have rendered possible the surgical treatment of many of these lesions we owe in large part to physiologists and pathologists who had little thought of the practical applications of the results of their researches. The instrument and methods which have enabled ophthalmology to attain such perfection in diagnosis and treatment rest upon researches in physiological optics belonging to the domain of pure science. It could not have been anticipated by those who began the study of the microscopic organisms which cause fermentations and infectious diseases, that their study would lead to a revolution in surgical treatment, and would open prospects which it would now be hazardous to specify as to the prevention and cure of infectious diseases. Did time permit, and were it necessary, much more evidence of similar character could be brought forward to show that those who work in laboratories, it may be without a thought as to the practical utility of their investigations, are no less genuine contributors to the science and art of medicine, than those who study diseases by the bedside.

As has already been mentioned, pathology has to do with abnormalities, not in man alone, but in all living things, both animal and vegetable. The points of contact between animal and vegetable pathology are more numerous than might at first glance appear. The student of animal pathology can draw many instructive lessons from such subjects as the behavior of wounds and the parasitic affections in plants. We are most of us probably inclined to think too much of the separation between the pathology of man and that of the lower animals. While there is a wide distinction in the dignity of the object of study, yet from a scientific point of view this separation is of little account.

Pathological investigations of diseases of animals constitute no less genuine and valuable contributions to pathology in general, than do similar investigations of human diseases. The advancement of recent years in the education and aims of those who devote themselves to animal pathology, will serve to bring into closer relations the students of human and those of comparative medicine.

It may be useful for us to consider briefly some of the relations and points of contact between human and comparative pathology.

In the first place there are many diseases which are common to man and to animals. These can often be studied to greater advantage upon animals in which many conditions can be controlled, which are beyond our control in man. In animals every stage of development of the disease can be studied, and in general, fresher material can be obtained. We can modify in various ways external and internal conditions so as to reach a clearer comprehension of the morbid processes Moreover the same disease may present interesting pathological peculiarities in different species of animals, so that the study of its occurrence in a single species, affords most incomplete knowledge. For instance, the pathologist whose sole knowledge of such a disease as tuberculosis is derived from the study of the disease as it occurs in man, has a far less complete understanding of this affection, than one who is also familiar with the striking peculiarities of this affection in cattle, swine, fowls, and other animals.

Especial importance attaches, of course, to the study of such diseases as are communicable from animals to man, as for instance, anthrax, glanders, tuberculosis, many entozoic affections, etc., and in general these are the animal diseases which have received the most attention from the students of human pathology.

One of the most important departments of comparative pathology is experimental pathology, the value of which to human pathology has long been recognized. To make of experimental pathology a distinct speciality and to endow it with a separate professorship as is done in some foreign universities, does not seem to me to be in the direction of the most fruitful and healthy development. The experimental method is the handmaid of pathology in all its branches, and is the only means of solving many important problems. The experimental production of diseases in the lower animals affords an insight to be gained in no other way as to the causes, development, lesions and functional manifestations of many diseases. Experience, however, has shown that grave errors are likely to be committed by experimental pathologists who have no knowledge of the natural diseases and conditions of the animals used for experimentation. How often, for example, have those studying the question of experimental tuberculosis, mistaken for genuine tubercles nodules produced by parasitic entozoa and to what misleading conclusions have such incorrect observations led.

There are as many general pathological processes which can be studied to better advantage in animals than in man. Such subjects as inflammation, œdema, thrombosis, embolism, and infection have been elucidated in large part by observations made on animals. Due caution is of course to be exercised in applying such observations directly to human beings.

Inasmuch as it is rarely possible for us to produce artificially all of the conditions which cause natural diseases, and as our very method of experimentation is in itself often a perturbating factor, it is no less important to study animal diseases resulting from natural causes, than it is to study the same diseases experimentally produced. Of course there are many diseases which have not yet been opened to the experimental method of investigation.

Questions of etiology and of pathogenesis are among those which have received and are destined still further to receive the greatest illumination from studies of comparative pathology. At present, probably no subject engages the attention of pathologists to a greater degree than the microscopic organisms which cause infection. If we had been confined to human beings in the study of infectious diseases, our knowledge in this direction would have been only a small fraction of what it is at present. In no single instance could the complete chain of proof required to demonstrate the causation of an infectious disease by a specific micro-organism, have been furnished. The far-reaching principle of preventive vaccination or inoculation would not be known.

A most important and promising field of pathological study, at present only partly cultivated, is found in the infectious diseases of animals and of plants, not only on account of the great economic interests often involved, but also as a means of widening and deepening our conceptions as to the causes, development, prevention and treatment of infectious diseases in general. Any pathologist who is at all familiar with the remarkable and peculiar conditions under which the so-called Texas Cattle Fever of the United States develops and spreads, will realize that the complete elucidation of all the etiological factors of this disease not only would contribute to the solution of a great economic question, but also would open fresh points of view in our conceptions of infectious agents and their properties. When we consider the many conditions which it is in our power to control in studying animal diseases, and above all the possibility of submitting to an experimental crucial test our conclusions, it is clear that the study of natural and artificial infections, as well as of many other diseases in animals, is calculated to advance in the highest degree the science of pathology. It is not a small thing that questions which were once considered to be wholly transcendental, as for instance the doctrine of immunity against infectious diseases have been brought within the working domain of experimental pathology.

Nor is it in the causation of infectious diseases alone that the comparative study of human and of animal diseases is destined to advance etiology. It is reasonable to expect that this comparative study will help to clear up many factors, at present obscure, in the causation of human diseases, including the influence of social conditions.

But let us take a broader view of comparative pathology than that which considers abnormalities only in man and in animals related to man in structure and function. I believe that many problems and facts in human pathology await for their complete elucidation the same application of the comparative method of study which has made of normal anatomy virtually a new science. What a barren mass of apparently unrelated facts is human anatomy when studied without reference to comparative anatomy and embryology! If knowledge is the understanding of the real nature of a thing, and how it came to be as it is, then there is no knowledge of human anatomy without the aid of comparative anatomy and embryology. How difficult and unmeaning is the old method of studying the anatomy of the human brain and how fascinating does the anatomy of this organ appear in the light of development!

A light similiar in kind, if not equal in intentensity, will be shed upon human pathology by a fuller insight into comparative pathology. We possess at present scarcely the rudiments of a comparative general pathology, but how useful and significant is even our fragmentary knowledge of this subject. The charm and impressiveness with which Metschnikoff has developed and presented the phagocytic doctrine is due largely to illustrations drawn from comparative pathology. It is impressive to see pictured in living forms from the lowest up to the highest, the combat with invading micro-organisms of infection. While the phagocytic doctrine can not be accepted in its entirety, it is interesting to observe that it received its origin and its chief support from observations made upon the lower forms of life, rather than from those on man and the higher animals.

The interesting and important discoveries concerning the curious parasitic organisms associated with malaria may seem to the student of human pathology anomalous and without analogy, but in Prof. Wright's admirable address to-day upon the sporozoa, we have had presented to us not only the life history of the class of organisms to which the malarial parasites probably belong, but also many examples of similiar parasitic affections of lower animals. We may expect still further information concerning this interesting group of infectious micro-organisms from researches in comparative pathology.

Take for instance one of the most disputed and still unsettled problems in pathology, the conditions which cause multiplication of the fixed cells of the body, a question which is intimately associated with the still broader one of the response of cells to the action of external stimuli. Can it be doubted that if we were acquainted with the behavior of cells in all types of living things from the unicellular

organism upward, under the influence of such stimuli as cause inflammation in human beings, under the influence of losses of substance and under various other conditions, we should have a much clearer comprehension of one of the fundamental and most common pathological processes in man?

The interesting studies of heredity by Weissman and others, pertain in part to pathology and also illustrate brilliantly the value of the comparative method of research.

The application of embryology to the explanation of congenital malformations is familiar and has long been an acquisition of human pathology. More recent is the endeavor to refer the origin of the genuine tumors to anomalies in fœtal development. It is probable that experimental and comparative pathology also will shed much light upon the still obscure question as to the origin of tumors.

A large mass of observed pathological facts we must now accept without adequate explanation. It is often the fundamental and common morbid processes which are most obscure. For many of these we may hope to find satisfactory explanation in the results which the comparative study of pathology will afford. At present nothing is to be gained by attempting to generalize from scanty and incomplete observations in comparative pathology. We must first accumulate a store-house of facts. We need investigators who shall study pathological conditions not in man alone or in the higher animals alone, but also in the simpler forms of plant and animal life. Something has been done in this direction, more indeed than is generally utilized in human pathology, but much more remains to be done. Conditions and processes which are difficult to comprehend in animals of complex organization often become clear in organisms of simple structure. Our pathological concepts are now derived almost wholly from observations made upon highly complex forms of life. I believe it to be no illusion to anticipate in thought, a time when all forms and kinds of living matter will be included in the domain of pathology, and when pathological laws will be derived from results of investigations which begin with unicellular organisms and which end with man. By the adoption of this comparative method of study, pathology will in reality acquire greater simplicity and deeper significance than it now possesses.

As the student of normal biology does not attempt to cultivate equally the whole field belonging to his subject, so the pathologist can not be expected to cover in his investigations the whole domain of pathology as thus broadly outlined. There will be special workers in various departments. As in normal biology, so in pathological biology, from the combined labors of all there will be constructed a science broader, richer and fuller of meaning than that which we now possess. The ideas which I have endeavored to present, although necessarily in a brief and cursory manner, concerning pathology in its relations to general biology, are naturally suggested by the opening of this biological laboratory. Permit me in conclusion to say that it is in a medical school in intimate and organic connection with a university where such laboratories exist, that the highest cultivation of pathology as a science is to be expected. Here is the favorable atmosphere, here the stimulus of allied sciences, and here the most enlightened appreciation and encouragement.

THE USE OF THE MICROSCOPE AND THE VALUE OF EMBRYOLOGY.

BY CHARLES S. MINOT, M.D.,

Professor of Embryology, Harvard Medical School, Boston.

Mr. President and Gentlemen—It has been said that the noblest study of man is man. There are many who believe it; but we who are gathered here to-day remember the purpose of our gathering, and know that the noble study of man is but a part, and that not even the greater part, of the nobler and vaster science of biology, the new birth among you and fair hopes of which we celebrate. Much has been told you by the able and distinguished savants who have preceded me of the stirring interests of biological science, and of the manifold bearings it has upon our thoughts, our philosophy, and also upon the practical exigencies of our daily life. But were I to tell you, even in mere catalogue form, of the manifold ways they have left unmentioned in which biology touches upon our affairs, I should occupy a far longer stretch

of time than even your Canadian courtesy would have the patience to endure.

I must, therefore, select some small portion, and of that speak briefly. I choose, as is common wisdom, from that part of the extensive domain of biology with which I am best acquainted through my own studies. I ask you to permit me to address you a few words concerning the use of the microscope and the value of embryology.

The first microscopes, such as those used by Malpighi, were curiously simple—a small piece of wood with an upright at each end; in each upright, a hole; in one hole the lens was fastened, in the other the preparation; a separate microscope for every preparation. These simple instruments were sent about—many of you have doubtless seen them—and entertained court ladies and others who cared for the newest curiosity. The modern microscope is a creation of this century, and began its development with the invention of achromatic lenses by Amici. Since his time the construction of the compound microscope has made great advances, not only in the build of the stands, but more especially in the lenses. We have only to note the introduction of water immersion; later, of oil immersion, objectives; and the recent invention of the wonderful apochromatic lenses, by which the capacity of the microscope is, I am tempted to say, almost doubled.

The reason why the microscope—why improvements in it are so important to the biologist is, that the size of the elements with which he has to deal is different from that in other departments of science. It is only in the organic world that the explorer finds the microscopic structure to be his most important guide. It is true that the microscope is of great utility in other departments of science. I do not overlook its applications in physics. I do not forget what it can reveal to the retrographer examining rock sections; but still I assert that it is only in biology that the microscope is the supreme instrument of research. Now, the proper use of this precious implement is an art difficult to acquire, but invaluable to the biological possessor of it. It demands not only an acquaintance with the elaborate methods of preparing the tissues, hardening, sectioning, staining, and so forth, but also the acquisition of a peculiar experience of the eye, and habit of the hand, which can be gained only by industrious and well-directed practice, and, besides all this, it demands the cultivation of the geometrical faculty of the mind. With the microscope we can see only one plane, and we have to build up our plastic conception by combining the views we get in various planes into a mental image corresponding with the actual structure, somewhat as the mechanical engineer makes out the form of a machine from the elevation and plan. This mental process is much harder to carry out than one might believe who had had no experience in trying to drill students into the habit of it. In this building there is, to an unusual degree, provision made for microscopical work, as I see by the broad windows open to the best light, and by the general laboratory arrangements. In all this, I believe we have to acknowledge the wisdom of Prof. Ramsay Wright. I congratulate you in having at the head of your biological department one who thus recognizes the real needs of the student, and makes good provision to satisfy them. You all know the immense usefulness of the microscope, not only in medical science, but also in medical practice, as a clinical resource. The time is near when every physician will know, as a matter of course, how to use the microscope in his professional work. What your students learn in this building will tell through years to come.

The field of biology known as embryology has great significance both to the pure investigator and to the practical medical man. It explains structure. As we follow back an organism to earlier and yet earlier stages, we see what is secondary disappear, and what is essential remain, and it is from the embryo that we have the fundamental plan of the body. He, therefore, who wishes his anatomy to be something better than a stupid system of mnemonics, must betake himself to embryology to obtain an intelligent comprehension of the body. Again come the practical applications. Let me instance a few. The so-called germ-layers govern the pathological changes; each of the three layers of the embryo has its specific morbid anatomy, and, with certain limitations, we may say that a disease proper to one germ-layer does not trespass upon the tissues belonging to the others. The laws of reproduction, too, it is

indispensable for the physician to know; these we must study in a broad way, and, in fact, the laws of reproduction have been discovered for the most part, not from the study of man, but of the lower animals. We can hardly exaggerate the necessity of the physician's knowing the structure of the uterus and its functional changes. Concerning the uterus we have, indeed, much to learn still. It is only recently that we have discovered that pregnancy induces an extensive destruction of maternal tissue, the mucous lining of the uterus undergoing degenerative changes such as we have been accustomed to think of as exclusively pathological. In a short time the epithelium of the pregnant uterus is destroyed and the glands break down. These appearances have been noted in the so-called uterine moulds, and have been usually considered as evidence of disease, but we now know that they are normal appearances of pregnancy. So with the canalized fibrine of the chorion of the ovum; that, too, is a normal condition of pregnancy. In these instances we have microscopic pictures which we have hitherto associated with the presence of disease, but which are really healthy growths. May we not expect that embryological research, in elucidating these changes, will lend a helping hand to her sister, pathology, who always has, and always must lag a little behind the knowledge of normal structure? To the physician embryology has to offer the key to many malformations of harelip, cleft palate, a foramen between the cardiac ventricles, congenital umbilical hernia, hermaphroditism and pseudohermaphroditism, and a long array of other arrests of development. Indeed, embryology ought to form a part of every medical curriculum, and I am glad that you include it in your plan. May our colleges in the States imitate your example!

Embryology requires to be studied broadly, and by the comparative method. Only by so doing can a just estimate of the facts be secured. Confine your studies to the development of man, and you will never understand it. Give the mind range and opportunity, and it will soon pick out by comparisons drawn between various species that which is essential and significant. It is from such studies that we have been brought lately to deep problems. We see now in the course of development that the early embryonic cells have a large nucleus with very little protoplasm, and that the older cells show a great increase in the amount of protoplasm in proportion to the nucleus. You are all familiar with the famous apothegm which designates protoplasm as the physical basis of life, but in the light of what I have just said, it might be as well defined as the physical basis of advancing decrepitude. Again, we observe that it is only in the simpler tissues that there is much possibility of growth. As the tissues become more highly differentiated, they lose their power of growth. You all know that the cells of the spleen, of the skin, and of other simple tissues, multiply in the adult, but in the highly specialized nervous system we never find any cell divisions. Now this loss of reproductive power, coincident with specialization of structure, may prove to be but the beginning of that final loss we call death. If this be true, then death is a penalty we pay for having a high organization. We pass beyond the present bounds of science, but hope and hypothesis ever lead us, and who dares to say where the bounds of discovery are set in biology? Is not this very building a monumental assertion that we have not reached them yet?

The reason why I allude to these things is largely a personal one. Prof. Wright I have known for many years, and I have often had occasion to wish for his counsel or for his advice, because I have always found that he is one of those minds which naturally take themselves to the consideration of the larger problems of biology. These general questions and these complications of knowledge, which lead us to meditate upon the farthest reaching problems, will receive at his hand a larger share of consideration than they would get from many others of the biologists of the world. I congratulate you all most heartily upon the possession of this beautiful building. We have in the United States, unfortunately, scarcely any building equal to this; none, I think, superior to it for the purpose for which it is designed. Even my own University of Harvard, one of the richest and oldest in the States, has not anything I would call better than this. I thank you all for your most hospitable welcome. I had the pleasure of being here some ten years in the official capacity of examiner. I notice there is a certain

difference between that time and now. I was then not welcomed with the applause which you have generously given me to-day.

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

When a change of address occurs please promptly notify the Publishers. THE J. E. BRYANT COMPANY (*Limited*), 58 *Bay Street*

TORONTO, JANUARY 16, 1890.

THE NEW HOSPITAL IN TORONTO.

Senator Macdonald has long been recognized as one of the most noble, worthy and generous citizens of Toronto. To those who knew him best it was not a matter of surprise that he, who had ever shown a willingness to spend time and money to assist all worthy objects of charity, should have given the magnificent sum of $40,000 for the improvement of hospital accommodation in Toronto. This is only one among his many generous acts during his prosperous and honorable career, but we believe it is the most important one of his life. There is every indication that there will be a most generous response on the part of the public, and, as a consequence, there will arise in the near future a noble pile of buildings, which will together be known as the "Park Hospital of Toronto," which, to use the words of the trustees, "will prove through long generations a blessing to our people." All honor to one whom we are proud to own as a citizen amongst us! May he be spared many years to witness the results of the great work he has accomplished in the inauguration of such an institution.

The objects are two-fold: 1st, to furnish increased hospital accommodation for the benefit of those suffering from serious accidents or diseases. It is definitely understood, however, that no persons suffering from infectious or contagious diseases will be admitted. 2nd, To aid the cause of medical science. This consideration will be highly appreciated by both the general and professional public. It is becoming generally understood that it is highly important that no man shall receive a license to practice medicine in this Province until he has received a thoroughly practical training. Notwithstanding all that may be justly said in favor of laboratory work, especially in the primary subjects, there can be no doubt that the all important duty of the student is to train his senses, his observing powers, his staying qualities, his nerve, patience, presence of mind, together with all the reasoning faculties with which God has endowed him, in his course of clinical instruction. Do patients object to being made subjects for clinical teaching? No! they do not if treated with the consideration they deserve. On the contrary they are wise enough to see that this very system furnishes to them a guarantee that their condition will be thoroughly investigated and properly treated.

PROVINCIAL MEDICAL BOARDS.

The College of Physicians and Surgeons of Ontario is one of the best abused medical boards in the world. McGill, through Dr. MacDonnell, says "it imposes upon our students certain very vexatious regulations, and exacts of them pecuniary taxes wholly out of proportion to the benefits they may ever expect to derive from becoming licentiates"; and, among other adverse comments, adds that one of its objects is "to render it more and more inconvenient and uncomfortable for an Ontario student to seek his education out of his own Province." As we understand the question these words contain an insinuation that is neither just nor generous. They imply that our Medical Council is endeavoring by its "vexatious regulations" to prevent Ontario students from going to McGill; but as the regulations referred to apply to medical colleges in this Province as well as in Quebec, and as McGill is placed in the same position in relation to our Council as our own colleges, we think the imputation is quite unfair.

Dr. MacDonnell evidently thinks that our Medical Board is an expensive, vexatious, and useless concern which ought speedily to be wiped out of existence. Dr. Osler, of Johns Hopkins, is of a different opinion, as shown by his letter published in the *Montreal Medical*

Journal. In this letter he clearly expresses the belief that the present high standard of medical education in Ontario and Quebec is largely due to the uniformity in the qualification to practice —"a uniformity which the public has a right to expect, but which it certainly cannot obtain from irresponsible medical schools." We agree with Dr. Osler, and we feel certain, notwithstanding all that may be said to the contrary, that the system of granting licenses through a central examining board, which at present obtains in Ontario, is the best in the world.

We do not claim, however, that our Medical Council has yet reached perfection. Far from it! Its requirements are in many respects sadly out of touch with modern ideas of medical education. Many of the worst defects were ably criticised by Dr. MacDonnell in his recent address. The didactic lecture nuisance is becoming intolerable to students who wish to devote a large portion of their time to practical work in laboratories, dissecting rooms, and hospitals. The profession is commencing to appreciate this and will, we hope, before long proceed to abate the nuisance. Who will oppose the much needed reform? We fear the most sturdy opponents will appear among the representatives of some of our Medical Colleges. To many, who run medical schools on strictly business principles, there is a great charm in the double didactic method with a merely theoretical, written graduating examination. It is simple, easy and cheap. Our Provincial Medical Board has shown its non-appreciation of such considerations by making its examination eminently practical. We have no idea that it will stop at this step. We have no doubt that it will soon get on the right track, and make all its requirements fully accord with the views of the best of our advanced medical teachers in various parts of the world.

NOTES.

IN our explanations in last issue made with reference to the editors of the journal, we should have stated that Dr. Graham was compelled some time ago to give up his active work in connection with our editorial department because he had not sufficient time to attend to it. He allowed his name to remain for a time, and it was retained longer than he intended.

MEDICAL COUNCIL ELECTIONS.—Our readers will perceive by an advertisement that the elections for the Medical Council of Ontario will be held in March. Those presenting themselves as candidates for election are required to send in their nomination papers signed by at least twenty registered practitioners not later than 2 P.M. on the first Tuesday of March. Voting papers will be sent to those entitled to vote between the first and second Tuesday in March. The returning officers shall receive the votes sent to them up to the last Tuesday in March.

SIZE OF AMERICANS AND ENGLISHMEN.—Some time ago it appeared from statistics that the heads of Americans and Englishmen were growing larger. Quite recently (according to the *Medical Record*), Mr. Edward Atkinson has collected statistics which show that the whole American, as well as his head, is growing bigger. It seems that the Yankee and the Southerner are somewhat similar in figure; and they both have comparatively long legs and small waists. In the West, we are told, the waists are proportionately larger and the legs shorter from "climatological and ethnological causes."

THE LITERATURE OF GYNÆCOLOGY.—Dr. Skene, of Brooklyn, says that during the last eight years the literature of gynæcology has been enriched by 807 books, and 7,505 journal articles and pamphlets, or,on an average, about 2 books and 18 articles a week. Gynæcology is an interesting subject to general practitioners, but many such, in this province at least, have not completed the whole series herein referred to, and would be quite pleased to have these able and zealous authors pause for a time, so that they might have some chance of catching up, or "getting abreast of the times," as the popular medical vernacular so sagely expresses it.

Personal.

Dr. Geo. M. Shaw, of Hamilton, is spending a few weeks at Johns Hopkins Hospital, Baltimore.

Hospital Reports.

FOREIGN BODY IN ŒSOPHAGUS—ŒSOPHAGOTOMY—RECOVERY.

UNDER THE CARE OF LACHLAN M'FARLANE, M.D., IN TORONTO GENERAL HOSPITAL.

F.L. æt 23, moulder.

The history of the case is as follows :—On November 30th, at nine o'clock in the morning, while at work, he somewhat hurriedly took a drink of water. Whilst swallowing the water a plate with an artificial tooth attached became dislodged from the roof of his mouth; the first intimation he had of the dislodgement of the plate was that immediately after swallowing the water he felt something sticking in his throat, and at the same time observed that the plate was no longer in the roof of his mouth. He went immediately to a doctor, who, with the assistance of another practitioner, passed an umbrella probang, but did not succeed in doing any good. Dr. McDonagh then saw the patient, he examined with the laryngoscope, but failed to discover anything abnormal; a probang with a bulbous extremity was then passed into the stomach, and during withdrawal, a foreign body was detected, at a certain point a grating sensation was felt. Located by measurement it was eight and a quarter inches from the upper incisor teeth, or two inches from the upper limit of the œsophagus.

Œsophageal forceps of various kinds were introduced into the gullet; during one of these attempts the foreign body was seized, but the patient grasped the doctor's hand and forced him to relinquish his hold; all subsequent efforts to seize the body with forceps were unsuccessful. Measurements with the bougie were again made with the same result as before. The patient was sent to the hospital on the afternoon of November 30th. The following morning at 11 o'clock he was put under the influence of chloroform, and another effort was made to seize the plate by means of forceps, but this was again unsuccessful. At 2 p.m., ¼ grain of morphia was administered hypodermically; the patient swallowed some chicken broth and milk. During the evening he vomited on two separate occasions, but from 10 p.m. until 4 a.m. he slept well. On the following morning, December 2nd, at 6 a.m., he again vomited and complained of pain and soreness in the chest. At 9 o'clock he had beef tea and again at 1 p.m. without subsequent vomiting. In the afternoon shortly after 2 o'clock, Dr. McFarlane performed the operation of œsophagotomy. The operation was therefore undertaken fifty-three hours after the patient had swallowed the plate.

The patient was placed under chloroform; an incision was made beginning half an inch above the sterno-clavicular articulation and carried upwards along the inner border of the sterno-mastoid muscle to a point a little above the middle of the thyroid cartilage. The incision was carried down between the trachea and the great vessels; the omo-hyoid, sterno-hyoid, and sterno-thyroid muscles were drawn inwards; the thyroid body was exposed and was also drawn inwards; the great vessels were drawn outwards and protected by means of a spatula. During this dissection a few medium-sized veins were cut and ligatured at the root of the neck. The wound was explored with the finger, and at the lower angle a foreign body was detected lying in the gullet, this was distinctly felt and was apparently fixed in position. A scalpel was introduced and an incision made into the œsophagus, cutting down upon the foreign body and by this means an opening was made a little more than an inch in length; the tooth was then felt projecting into the lower angle of the wound; this was seized and some traction made upon it, but the plate was not dislodged; the plate was then grasped by its superior margin and rotated on its antero-posterior axis, so that little by little it was rolled out from its position. The wound was then thoroughly irrigated with 1.2000 perchloride of mercury solution; the wound in the œsophagus was left open, it was not thought advisable to close it by suture. Several stitches were inserted so as to bring the edges of the skin wound into accurate contact, a small opening was left at the inferior angle to permit of the exit of a good sized drainage tube which was placed in position at the lower portion of the wound and was carried down to, but not through, the opening in the gullet. An antiseptic dressing was applied and the patient sent back to bed. The operation throughout was conducted with thorough antiseptic precautions.

He was very restless for some hours after the operation, the temperature rising to 101.8°; small pieces of ice were given him to suck. At midnight $\frac{1}{120}$ grain of atropia was administered hypodermically with the view of diminishing the flow of saliva and to thereby lessen his inclination to swallow. The patient had a good night.

During the next few days the patient's strength was sustained by means of nutritive enemata; occasionally he was allowed to suck a small piece of ice—his craving for something to drink was very distressing. The wound was dressed

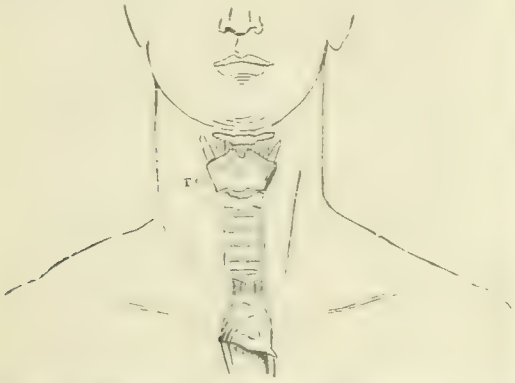


Fig. 1. The position which the patient's body occupied in the operation is indicated. The cartilages of the larynx are outlined and a portion of the left sternomastoid. The incision at the point where the larynx is opened lies immediately behind the trachea and is shown to the left of the middle line. The arrow to the left of the windpipe indicates the direction of the incision.

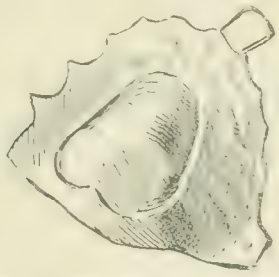


Fig. 2. Patient with tube in throat.

eight hours after the operation in consequence of discharge coming through the dressings; the discharge from the wound which at first was blood-stained serum became purulent and contained a considerable quantity of mucus, thus demanding pretty frequent dressing; from time to time the wound was washed out with boracic acid lotion. The hypodermic injection of $\frac{1}{120}$ grain of atropia was repeated every six hours. The temperature which fell to 99.4° the morning after the operation, continued normal during the subsequent progress of the case.

On December 7th, whilst dressing the wound, the patient was allowed to drink a small quantity of water out of a tumbler, the greater amount of water was forced out through the wound during the act of swallowing. This happened again on the 8th when he was allowed to take a sip or two of water, and at this dressing there appeared some tendency to bagging at the lower part of the neck, the lower angle of the wound was therefore more freely opened up and a good sized drainage tube inserted; efficient drainage was thus established.

December 9. The patient complained of dryness of the throat and irritation there, so that it was deemed advisable to stop the administration of atropia which had been continued up to this point. The patient was allowed to swallow half a pint of water, and of this about four teaspoonsful came out through the wound.

December 10. He drank a small quantity of milk, some of this also escaped through the drainage tube. The patient's strength was not being satisfactorily maintained and whiskey was added to the nutritive enemata.

December 12. Two divided oysters were swallowed with some milk, but more milk came through the wound than usual, although the oysters apparently passed on into the stomach; the nutritive enemata were stopped. During the evening he swallowed four divided oysters and some milk, the latter was partly passed on into the stomach but a considerable amount came out through the wound. On the following day he partook of custard, five divided oysters and ten ounces of milk; three pieces of oyster and a small quantity of custard and milk came through the wound. On December 14th, whilst syringing the wound a piece of oyster came away in the discharges. During the next few days the patient was fed upon custard, jelley, milk, and occasionally divided oysters, but there seemed to be no tendency for the opening in the œsophagus to close up; during each act of swallowing a considerable quantity was always forced through the wound, the patient constantly complained of hunger.

December 18. The administration of nutritive enemata was again commenced, and feeding by the mouth entirely stopped, this was continued for three days. On December 21st, five ounces of milk with one ounce of water were

swallowed, none came through the wound ; the nutritive enemata were continued until Dec. 23rd. On that day he swallowed oyster soup, custard, jelly, and milk, all of which apparently passed on into the stomach ; he continued to partake of this sort of food without any trouble arising. On Christmas Day he had porridge and milk for his breakfast, and on subsequent days was able to take semi-solid nourishment without mishap, the purulent discharge from the wound diminished daily.

On December 28th patient was discharged from the hospital, he had no inconvenience whatever in swallowing his food and the wound in the neck was almost completely cicatrized.

For notes of this case we are indebted to H. A. Turner, resident surgeon at the hospital.

Remarks.—Œsophagotomy was undoubtedly called for as the only means of obtaining relief for the patient. There was no difficulty encountered during the operation, there were no important structures divided, and the bleeding, which was insignificant, was easily controlled. It was not thought advisable to suture the opening in the œsophagus ; the plate had been fifty-three hours in the gullet and was firmly impacted so that probably some extent of damage had been done to the œsophageal wall, and it was consequently thought safer to leave it open.

During the subsequent history of the case, the most noteworthy point is the way in which the act of swallowing could never be completed without forcing out the contents of the gullet into the wound. It was attempted at one time to pass a stomach tube and so to feed the patient ; but he resented the attempt so strongly that the thing was abandoned as impossible. For a time he was allowed soft food by the mouth, the enemata being stopped, but invariably some of it came through the wound. On the fifteenth day after the operation the nutritive enemata were resumed and for three days he had absolutely nothing by the mouth ; the wound gave no further trouble, and a complete cure resulted.

GENERAL TUBERCULOSIS — DEATH — POST-MORTEM.

UNDER CARE OF DR. NEVITT, IN HOSPITAL FOR SICK CHILDREN, TORONTO.

E. C. F., æt. 9, admitted into hospital July 16th, 1888, complaining of persistent pain in the head so severe as to prevent her from sleeping. Family history could not be obtained. Patient has had measles, mumps, and chicken pox.

History of present illness. — During past winter began to have pain in her head so severe that she could not sleep without medicine. Pain is in frontal and occipital regions, but especially over the left eye ; the pain comes on every day at same time, viz., 6 a.m., lasting until 6 p.m., it then ceases but reappears toward midnight. For some time past there has been a discharge from the right ear. Dr. Palmer examined the ear three weeks ago, and said there was a perforation of the membrana tympani and sufficient pus within the ear to account for the pain. Her sister says that during the pain her eyes sometimes turned in.

Present condition. — Fairly well nourished ; skin clear and pale, with veins prominent ; expression that of one in constant pain ; bright and intelligent. Since admission to the hospital her sleep has not been disturbed by the pain. The pain is now in the occiput, running down neck and spine on left side ; pain in forehead is greatest over left frontal eminence. There is a tender spot over right frontal eminence. Pain on pressure behind right ear and in front of tragus, lymphatics at right angle of jaw and in left axilla, swollen and tender. Tenderness on pressure over spine ; motor power, normal ; reflexes, superficial and deep, normal ; tactile sensibility, sensibility to pain and temperature, normal ; special senses, normal save right ear, watch only being heard at 4½ inches. Vascular, respiratory, and digestive systems normal.

Treatment.—℞. Pot. bromid gr. ii., tr. calumbæ m. v., syr. simpl. ad. ʒi., t.i.d.

July 23. Less pain, although it persists in frontal and occipital regions.

July 27. Pain worse, fœtid discharge from the ear ; boracic acid is to be blown into the ear.

Aug. 4. Ear still discharging ; has ceased to complain of pain in the head.

Aug. 5. Temp. p.m., 101°F. ; no perceptible cause.

Aug. 12. Evening temperature has been running up to 102°F., with morning remissions of two or more degrees ; no pain ; less discharge from the ear ; tongue slightly pasty ; pulse 120.

Aug. 13. No ear discharge to-day; quinine gr. ⅓ added to mixture.

Aug. 30. Dr. R. A. Reeve examined and found a perforation of the right membrana tympani in the process of healing; Politzer's bag does not improve the hearing. Ophthalmoscopic examination:

Right Eye.—Optic disc hazy, veins sinuous; slight papillitis.

Left Eye.—Optic neuritis more marked.

Sept. 14. Occipital pain every afternoon; chilly sensations; no discharge from ear.

Oct. 12. Temperature ranging around 103°F. every night.

Oct. 18. Somewhat worse; complains more of the pain in head; had a profuse attack of epistaxis, tenderness just below the ear, but not over mastoid process.

Oct. 27. To endeavour to relieve the pain in head she was given ℞. antipyrin grs. iii., to be repeated in half hour for three doses if needed.

Oct. 28. Antipyrin seems to afford some relief.

Nov. 9. Failing.

Nov. 19. Getting worse; greater discharge from ear, cervical glands swollen; right tonsil swollen.

Nov. 24. General hyperæsthesia; no enlarged abdominal glands; creaking heard in right chest.

Nov. 26. Chills and sweats at night; slight photophobia.

Nov. 28. Worse; epistaxis; tongue dry and coated; small crepitation in left lung.

Nov. 29. Dr. McPhedran examined patient; crepitation and slight dullness over left lung; spleen enlarged; photophobia marked; no paralysis.

Nov. 30. Last night she thought there was a bad smell around her bed; so fixed was this idea that she had to be moved to the other end of the ward in order to quiet her. At midnight she had a convulsion, which commenced with a scream. At the beginning of the fit her head turned to the right side. When Dr. Nevitt saw her there was opisthotonos, and right lateral deviation of both eyes. She was given an enema of bromide of potassium and chloral.

Dec. 1. Pupils dilated; no response to light; right lateral deviation of eyes; Cheyne Stokes respiration; difficulty in swallowing, but no other sign of paralysis. Unconscious ever since convulsion. Coma deepens until death this p.m.

POST MORTEM EXAMINATION.

Inspection.—Female; complexion dark; emaciated; rigor mortis well marked; P. M. staining in usual places; skin over lower part of abdomen and upper part of thighs particularly dark; in external meatus of right ear a crust of yellowish white material found; teeth and lips covered with sticky half dried mucus; on inner side of left index finger cuticle is gone for ¼ inch.

Section.—Heart; pericardium extremely thin, contains about ℥ii. of fluid; right auricle distended with blood; size of heart normal; thrombus attached to left border of right ventricle at junction of anterior wall with interventricular septum, attached also to anterior wall of ventricle, one inch in breadth; from this a clot, partly A.M. partly P.M., extends into pulmonary artery. In left ventricle a thrombus, extending from apex to mitral valves, attached to both and reaching into the aorta. Valves all normal. Foramen ovale closed. Interventricular, undefended space, extremely thin at two points.

Lungs.—Front and free borders very pale and anæmic.

Left Lung.—No adhesions to parietes, a few delicate adhesions between the lobes. Outer and upper part of lower lobe shows a triangular area of collapse. In the base of this triangle is an abscess cavity, containing a quantity of curdy pus and cheesy matter. This abscess opens into a branch of main-bronchus about one inch from root of lung. At root of lung, and lying upon main-bronchus is a caseous lmyphatic gland. Other bronchial glands, indurated. Section of upper lobe, shows it to be thickly studded with miliary grey tubercles. None seen in lower lobe. Slight emphysema around the free border, especially of upper lobe.

Right Lung.—Splenization in greater part of the lower lobe, and outer and back part of upper; remainder very anaemic, muco-purulent matter flows from bronchi on section: whole lung studded with grey miliary tubercle.

Kidneys:—Right, size normal, capsule peels off readily. Healthy, save in a spot where there is a small abscess size of a split pea.

Left, same condition as right, only two small abscesses found.

Spleen :—Slightly enlarged. Indurated glands at hilus.

Duodenum and Stomach :—Bile ducts, pancreatic ducts pervious. Stomach contains blackish green fluid. Walls pale and coated with mucus.

Liver :—Capsule adherent to diaphragm in a few spots. In these parts of the capsule are seen numerous grey milliary tubercles. The liver has the general appearance termed nutmeg, and a few tubercles are to be seen in its substance, especially towards the surface.

Large Intestines : A small date-stone shaped mass of fœcal matter found in vermiform appendix. Extensive ulceration of caput coli and part of v. appendix. Ulceration has honey combed appearance. Very extensive ulceration of mucous membrane, patches reaching to within six inches of the anus.

Small Intestine :—Numerous small ulcers in mucous membrane of lower part of ileum; typical tubercular ulcers.

Pancreas. Normal.

Brain :—Ante mortem clot in longitudinal sinus. Great amount of serous fluid in subarachnoid space. Meninges over vertex, congested. Some small gray points were seen in the pia in front of Pacchionian bodies, possibly tubercles. Miliary tubercles distinct at commencement of left sylvian fissure and following vessels a short distance. A few also in right fissure very little exudation at the base. Brain substance throughout firm and shows puncta cruenta very well marked. A minute cyst large enough to contain a linseed grain found in right natis. Scattered through the cerebellum are numerous yellow firm masses, both deeply placed and superficial. These on microscopic examination proved to be masses of tubercle.

Obituary.

HUGH MUNRO MACKAY.

We have to announce, with deep regret, the death of Dr. H. M. Mackay, of Woodstock, January 17th. He had been much overworked during the fall and early winter, and, as a consequence, had become much reduced physically. While in this weak state he was unfortunately attacked with pneumonia, and died after a comparatively short illness. He graduated in the University of Victoria College in 1867, and in the following year passed the double qualification examination in Edinburgh. He has long been recognized as one of the leading practitioners of Western Ontario, and three years ago was appointed a member of the Provincial Board of Health. Personally he was a most estimable man whom no one could know without highly respecting. It is a sad blow to the Provincial Health Board, as well as to the Province, to lose, within a few weeks, two such able and worthy men as Drs. Yeomans and Mackay.

Books and Pamphlets Received.

Personal Observations of Leprosy in Mexico and the Sandwich Islands. By Prince A. Morrow, A.M., M.D.

Case of Tuberculosis Papillomatosa Cutis. With Remarks on the Relation of Papilloma to Syphilis, Lupus, etc. By Prince A. Morrow, A.M., M.D.

Miscellaneous.

The Government of Victoria is about to establish a retreat for inebriates.

STATISTICS OF LEPROSY IN THE UNITED STATES.—In view of the general impression that Leprosy is spreading in this country, it is desirable, in the interest of the Public Health, to obtain accurate information upon this point. The undersigned is engaged in collecting statistics of all cases of Leprosy in the United States, and he would ask members of the profession to aid in this work by sending a report of any case or cases under their observation, or coming within their knowledge. Please give location, age, sex, and nationality of the patient, and the form of the disease—Tubercular or Anæsthetic; also any facts bearing upon the question of contagion and heredity. Address Dr. Prince A. Morrow, *Journal of Cutaneous and Genito-Urinary Diseases*. 66 West 40th Street, New York.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street

TORONTO, FEBRUARY 1, 1890.

Original Communications.

CASES IN PRACTICE.

BY JAS. F. W. ROSS, M.D.,

Surgeon to the Woman's Hospital, and lecturer in Gynecology, Woman's Medical College, Toronto.

RECTOCELE—COMBINED PARING AND FLAP SPLITTING OPERATION—SECONDARY HÆMORRHAGE ON THE ELEVENTH DAY.

Mrs. G., æt 47; married, several children. Last labor bore twins. Perineum torn—laceration not complete. Labor was very rapid. Ceased menstruating 12 months ago. Suffers from protrusion of posterior vaginal and anterior rectal wall. No prolapse of uterus, also has large hemorrhoids. Is kept in a very uncomfortable condition by this protrusion. Advised operation. I determined to combine Hegars paring operation for the posterior vaginal wall and Tait's flap splitting for the perineum. Patient anæsthetized and drawn to the edge of the bed, in the dorsal position, with knees elevated with a Clover's crutch. A continuous douche was used to keep the parts free from blood. I then began my incision well up to the cervix and ended at the side of the perineum. The same was repeated on the other side. The flap with a broad base below at the perineum and the apex above was dissected off, beginning above and working downwards. To prevent hemorrhage, the edges of the cuts were stitched up from time to time, with a continuous catgut suture, and after stitching them then more flap was dissected off until at last the perineum was reached. The flap was severed straight across at its base with one cut of the scissors. The perineum was then split, the splitting running well up into the labia. These sutures were passed with a perineum needle, beginning inside the skin, and going outside the mucous membrane on each side. They were of silk worm gut. The parts were thus drawn nicely together. In dissecting up the posterior vaginal flap, the recto-vaginal septum was found to be unusually thin, and it was only by great care that the rectum was not opened. Hemorrhage was rather troublesome, but was checked by hot water. The piles were then ligated and removed. The patient subsequently suffered some pain from the hemorrhoids, but an opiate and the local use of 4% oleate of cocaine checked this. Everything went well until the eleventh day, when during a fit of uncontrollable laughter, she felt something give way. Hemorrhage began at once, and was very profuse. As soon as I arrived, a small speculum was passed beneath the pubic arch, so that the parts should be but slightly disturbed, and the vagina was tamponed. This did not altogether suffice, and some oozing continued, until at last the bleeding spot, as seen by reflected light from a laryngoscopic mirror, was touched with tincture of iron. This had the desired effect. Tampons were changed every 24 hours, and on one or two days were changed twice a day. Some oozing continued to wet them, but as it was not enough to endanger the patient's life, I

determined to watch and wait. The tampons produced irritation of the rectum, and necessitated the secondary use of the catheter to draw off the urine. The bladder resented this interference, and the use of the catheter had to be discontinued. A slight diarrhœa set in, and this produced some fresh hemorrhage, so that I almost determined to tear down the parts and tie the bleeding point. But at last the bleeding ceased, the tampons were discontinued, and the patient made a good recovery. It is now nearly 3 months since the operation, and I find the parts well healed, the vaginal outlet well narrowed without any sign of protrusion of the rectal wall. The flap splitting operation saves much time to operator and patient, and I believe is successful in nearly every case in which it is used. The patient can get up and go round with the stitches still in situ, and can return to the operator for their removal in from 3 to 4 weeks after they have been inserted. This is a decidedly rapid method of performing a colpo-perineorrhaphy.

BROAD LIGAMENT HÆMATOCELE—SUPPURATION —PUNCTURE FROM VAGINA—CURE.

Mrs. M., æt. 22; first seen August 1st, 1889. Married two or three years, one child 10 months old. Catamenia, now absent, commenced after the birth of baby in the fifth month, and she has been regular up to July 1st. Never missed a month. She went away to a picnic on July 14th, two weeks after her last menstruation. Fell off a swing to the ground. Only fell a short distance, but came down on her seat without being able in any way to break the fall. Immediately felt severe pain in the front and lower part of the abdomen; could not straighten up. Felt very faint. A desire to have an evacuation of the bowels came on, and she had her friends assist her into the neighboring grove, and endeavored to empty her bowels, but failed. She could pass nothing. She was brought home to Toronto by steamboat, and felt very ill all the way. The pain subsided, but in the middle of the night a severe griping pain came on. She became feverish. My father, Dr. James Ross, sr., was called in to see her. She was kep in bed; tongue became furred, bowels were very obstinate, until at last no fœcal matter passed through. Temperature rose to 103 and 104, pulse from 90-120. Dr. Ross, sr., asked me to see her with him. At first sight she looked like a patient in about the third week of typhoid fever. She could retain nothing on her stomach. Temperature 102. Pulse 100. Great thirst. Passing mucus every few minutes from the rectum. Pain when emptying the bladder. On examination perineum normal, but somewhat congested. Bloody mucus seen discharging from anus. Uterus fixed behind the pubes, not very tender, enlarged to about one-third more than its normal size Density about normal. The parametrium filled to the left and behind by a large tense mass with distinct fluctuation. A resistance over the lower abdomen could be made out, but no defined tumor could be felt externally. There was slight dulness on percussion. It reminded me particularly of a broad ligament cyst I had seen while with Mr. Lawson Tait. Mr. Tait made his diagnosis and confirmed it by abdominal section a few days later. But a "puffing" seemed to extend down to the utero-sacral ligaments, producing a tense band across the rectum. This accounted for the obstruction of the bowels present. The patient had had castor oil and other aperients, as well as several enemata, but they failed to move the bowels. As the mass was pressing down well into the vagina, I advised puncture. I concluded that the case was one of suppuration in the broad ligament. Next day, with the patient under chloroform, I thrust in a good sized wooden handled trocar, and at once the diagnosis became clear. A tarry fluid, mingled with pus, pronounced the case to be one of suppurating hæmatocele of the broad ligament. Along the trocar, the flat blade of a pacquelins cautery was passed, and thus the opening was enlarged. The vagina was washed out, and packed with iodoform-gauze. Next day the temperature fell to normal, a natural evacuation of the bowels took place, and the patient was free from pain. Twice subsequently, I passed a sound into the opening to keep it from closing too soon. Each day the vagina was washed with water night and morning, and then packed with iodoform gauze. The puncture was made on August 2nd. My notes say on September 1st, "Patient up and around. Uterus quite movable."

There are two or three points that bear out the clinical hist ry of such cases as recorded by others.

1. The sudden onset of the symptoms, after some violent injury or exertion.

2. The sudden obstruction of the rectum through tension of the utero-sacral folds.

3. The peculiar mucus discharge, like pink stained white of an egg, as diagnostic of rectal irritation. I have seen this symptom in other cases, and especially in a case of an abscess in a male, between bladder and rectum.

4. The good effect of operation, both immediate and remote. In cases with the fluid high up away from the vagina, I should always open them through the abdominal wall.

THE NECESSITY OF ENCOURAGING SCIENTIFIC WORK.*

BY VICTOR C. VAUGHAN, M.D.,

Professor of Bacteriology in the University of Michigan.

Science is knowledge; art is the application of knowledge. Science consists of facts; art utilizes these facts. Science investigates; art adapts. Scien e is the foundation; art is the superstructure. Science is the mariner who sails out over the seas of ignorance, and discovers fair islands and broad continents of truth; art is the immigrant who comes later, and tills the soil, and builds the cities

We are fond of saying that this is a practical age. By this we mean that our knowledge is utilized for some purpose. We are prone to speak lightly of those who may give their time and attention to the pursuit of knowledge for its own sake. But we should remember that we must possess knowledge before we can apply it. Science must always precede art. Convert all of your investigators, who are the discoverers of knowledge, into adapters of knowledge, and you will arrest the world's progress. Without a Franklin and a Faraday, there could have been neither a Morse nor an Edison. What would have been the condition of applied chemistry to-day, had not the Priestlys and Scheeles of 100 years ago worked and plodded? At that time the study of chemistry was pursued as a pure science, and its devotees were regarded as but little better than fanatics. To-day a hundred arts make practical applications of the discoveries of chemistry. The industries founded upon the researches of the humble chemist now feed and clothe millions, and enrich thousands. It has been stated that the commercial value of the discovery of the aniline dyes alone has repaid Germany a thousand-fold for all the money which that Government, as liberal as it has been in this direction, has invested in its numerous and well-equipped chemical laboratories. There is scarcely an honorable trade or profession which is not indebted to a greater or less degree for its position and efficiency to the labors of the scientific chemists of the past. Without a knowledge of the chemistry of metals none of our vehicles of transportation, from the dainty baby cart to the great ironclad of war, from the cheap dray of the poor man to the elegant private car of the rich man, could have been constructed. Without these labors, which are said to have been begun by Tubal Cain, the world to-day, instead of being occupied for the most part by great nations, would have remained a wilderness, with its solitude broken only by the cry of wild beast and savage man. No great cities, indeed, not even a hamlet, could have been built. There would be no commerce, no learning, no religion.

You must not understand from what I have said that chemistry is the only science which has benefited mankind. I have simply taken it as an illustration, and I do not know that it has any claim to first rank. Rob us of the knowledge which constitutes any of our great sciences and we are affected seriously, physically, intellectually, and morally. A wise nation will foster the sciences, for upon these depends its prosperity. Germany has been pre-eminently wise on this point. It has built and equipped universities as no other nation has done. It has filled Strasburg with soldiers and has walled and entrenched the quaint old city with the magazines of war, but the most impregnable fortress raised by the confederation in Alsace is the great university, to which many of the wisest and most learned men of the empire have been called, and the intelligent citizen who is still French in his patriotism, will tell you that his city has more cause of self-congratula-

* An address delivered at the Opening of the New Building of the Biological Department, University of Toronto.

tion than it had before '72, and he will point with pride to the stately university buildings which are but the outward manifestation of the genius and intellect which labor within.

Now, good neighbors of Ontario, I am happy to be with you, and do rejoice with you in this dedication of these handsome and well-equipped rooms to the holy cause of science. I can assure you that the ability and learning of the director of this department, Prof Wright, are well-known and highly appreciated by his co-laborers in the United States, and many of us have long regretted that you have not earlier supplied him with improved facilities for his work.

Let us briefly inquire into some of the scientific problems, the solution of which will demand the time, attention, and energy of this department. A simple enumeration of all these questions would require more time than I have at my disposal; therefore, I will dwell only upon those in which I am most interested.

All living things consist of individual parts, which the histologist calls cells. Some of the lowest forms of life are simple, free cells, and we say that they are unicellular. This simple cell must perform all the vital functions. It must digest, absorb, and excrete. Its range of function is necessarily limited. As we ascend the scale of organized life, we find a multiplication and differentiation of cells. In man certain cells have for their sole function the elaboration of the digestive juices, others are employed in the separation of effete and poisonous matters from the blood and their elimination from the system; some are devoted exclusively to the reception of impressions from the external world, some convey these impressions to the central nervous system, and others are more directly concerned in the intellectual processes. Health is maintained by the proper and correlated activity of these various groups of cells.

Within the past 15 years it has been clearly demonstrated that the introduction of some of the lower forms of vegetable life, called bacteria, into the body of man and other animals produces disease. The study of these micro-organisms has brought into existence and developed the science of bacteriology. A large amount of information has already been accumulated in this field of scientific work, and in the art of the preservation of health, hygiene, and the art of restoration to health, medicine has made valuable practical applications of these scientific facts. One of the objects of these laboratories and lecture-rooms is to make the young student acquainted with what is already known in the science of bacteriology. But there are many problems in bacteriology which remain unsolved, and to this your most earnest attention will be given.

The study of bacteriology, so far, has been nearly altogether morphological. I say this in no spirit of criticism. Indeed, I recognize the fact that it could not have been otherwise. The study of form naturally and necessarily precedes the study of functions. The ornithologist, on finding a new species of bird, first studies its size, its general formation, the colour of its plumage, the shape of its beak, the spread of its wing, etc. It is only later, and after more extensive observation, that he can tell you about its habits, how it builds its nest, what it feeds on, what birds are its enemies, etc. And it would probably require still more extensive observation before he can tell you what effect altered environments would have on the bird, whether or not it would thrive in a different climate, with only unaccustomed food to feed upon, and with new foes to encounter. Therefore, I repeat that I am not offering a criticism when I state that the study of bacteriology has been largely morphological. But I am sure that all will agree with me that these enemies to man's health and happiness, for such we can pronounce the pathogenic germs, should be studied from every possible standpoint. Suppose that we knew nothing about the yeast plant save its morphology, the size and method of development of the cells, we would know but little. The fact that yeast produces carbonic acid gas and alcohol is certainly equally important with a knowledge of its morphology.

The chemical study of bacteria offers a fruitful field for the investigator. What chemical alterations do they cause in the various media in which they grow? What fermentations do they induce? Why is it that altered environment so materially affects the virulence of some of them? Why is it that the bacillus of anthrax is so invariably fatal with certain animals, while others are wholly immune against the

same germ? The theory of the action of phagocytes would at best be only a partial explanation of some of these questions. Granting that an army of these, the natural defenders of the domain of the body, turn out to do battle with the invader, with what weapons do they fight? If they digest the bacillus, what digestive ferment do they form? How do they destroy those germs which are found lying dead in the intercellular spaces in a case of anthrax in a man?

There are two factors which enter into the causation of infectious disease. First, there must be susceptibility in certain cells of the body; secondly, the inciting cause is the specific micro-organism. Indeed, we might say that the primary cause lies in the tissue itself. Then there is the ever interesting subject of immunity against disease secured by the use of sterilized culture of the various specific micro-organisms. Is such immunity, which has already been obtained in a number of diseases, due to a true vaccination, or is it simply due to the establishment of a tolerance for a poison? How long will the immunity thus secured continue?

But I must not dwell too long on a single word. Should this laboratory be the means of solving a single one of the problems which I have mentioned, the money, time, and energy given to it will have been profitably applied, but there are other questions which will take up a large share of the time spent by professors and students within these walls.

The study of food and drink by the bacteriologist has only been begun. In many of the infectious diseases the specific poison finds its way into the body through the mouth. We are told by those who have investigated the subject that the chief source of infection with cholera in India is by means of the drinking water. The water is collected during the rainy season in tanks. These tanks not only serve the inhabitants for water-supply, but are also used as laundry and bath tubs. We are shocked at these statements, but how many cities in America discharge their sewerage into bodies of water from which they or neighboring cities take their drinking water supply? More than 500 people die annually in Ontario from typhoid fever, more than 5,000 are sick during the same time, and it is certain that the majority of these receive the poison which causes the disease with the water which they drink?

The probability of seriously affecting the health by eating food which has partially undergone putrefactive changes multiplies every year with the increased consumption of canned and otherwise preserved food.

But I must conclude, and in doing so, let me say that no one need fear that too much time will be given to theoretical or abstract science.

Every important scientific discovery in the past has sooner or later found its practical application, and always to the benefit of man. What could have been more unpromising of practical results than the discovery of micro-organisms in the blood of an animal sick with anthrax by Pollemler in 1849. When this observer reported that he had seen minute forms of life in the blood, some said that the objects which he had seen were bits of fibrine, others that they were not real at all but due to defects in the glass, while still others hinted very strongly that the defects were to be found in the observer's brain; but truth prevailed, and from that observation or discovery as a starting point, the science of bacteriology has been developed to its present importance, and by virtue of the facts forming this science the spread of infectious diseases has been limited as it could not have been done in the past. It was owing to knowledge founded upon that discovery that Asiatic cholera was arrested in New York harbor in 1888, and prevented from spreading through the United States and Canada.

Selections.

THE SURGERY OF THE KIDNEY.

The Harveian lectures by Mr. J. Knowsley Thornton, M.C., on the Surgery of the Kidneys, have recently been published. The method of treating most of the surgical diseases of the kidney by abdominal section, rather than by the lumbar methods, is advocated.

Floating kidney is essentially a congenital condition, the kidney having a true mesentery, so that it becomes practically an intra-peritonea organ. Mr. Thornton states that its chief surgical importance lies in the fact that it may be altogether impossible to reach it by lumbar incision.

Of movable kidney there are several varieties, and a deficiency in the adipose tissue is the chief predisposing cause. The kidney in both these conditions is usually abnormally sensitive, and hydronephrosis may be produced, or torsion of the ureters or vessels may cause uraemia. In treating these cases great comfort is often derived from using a specially constructed truss; others derive more benefit from a simple spinal elastic bandage, or from a half moon-shaped pad worn inside an ordinary abdominal belt. In extreme cases nephrorraphy may be performed from the loin, and the kidney may be fixed as recommended by A. Pearce Gould, by kangaroo tendon sutures, which may be left in permanently. Nephrectomy for simple mobile or floating kidney is quite unjustifiable.

Hydronephrosis is a distension of the kidney with its own secretion from some obstruction to the escape of urine. The obstruction may occur at any point between the ureter and the meatus urinarius; it is not common in the ureter. Many cases are congenital, the ureter being abnormal in structure or in anatomical relation to the kidney; in other cases it is an acquired condition. It may affect the whole kidney or only some part of it, and the fluid in an advanced stage frequently contains neither urea or uric acid, but is watery with a little salt and a trace of albumin, later it may contain blood or become pyoid, producing one variety of pyonephrosis. The most certain symptom is the presence of tumor, which occasionally disappears, the disappearance being accompanied with increased flow of urine. Careful aseptic puncture far back in the loin is in many cases the only certain means of diagnosis. Puncture has been tried for treatment, but there is no good evidence that cures are often effected by it. If relief follow puncture then it may be repeated from time to time; but if the fluid rapidly reaccumulates some more radical operation must be undertaken. Mr. Thornton has completely failed in two cases with incision and drainage, and he believes that nephrectomy is the proper treatment in all cases which do not improve after one or two tappings.

Pyonephrosis is a condition in which we have distension of the kidney with purulent urine or pus alone; it commonly results from suppuration in an old pyonephrosis; it may follow calculus and careless catheterism. It must not be forgotten, however, that the kidneys are the great excretors of septic organisms; hence suppuration may occur in them without direct external agency. The inflammation and suppuration may extend not only through the secreting structure but into the surrounding adipose tissue, and thus add greatly to the difficulties to be encountered in giving surgical relief. The symptoms are those common to all suppurations, together with the appearance of pus in the urine, and to these may be added at any moment the symptoms of septicæmia or of uræmia. The treatment will vary according to the cause and extent of the pyonephrosis. Simple pyonephrosis resulting from injury, from the transformation of hydronephrosis, from the earlier stages of tubercle and scrofula, and from the presence of calculus, may all be successfully treated by incision and drainage, combined in the latter variety with the removal of the stone.

Pyelonephritis is an inflammatory suppuration involving the whole kidney and is the result of some disease of the pelvic urinary organs, and is commonly known as "surgical kidney." It nearly always involves both kidneys and is not susceptible of surgical relief. Renal abscess is a collection of matter in the tissue of the kidney arising from injury, calculus, spread of inflammation from neighboring parts, or from the administration of some drug specially obnoxious to the kidney. It is usually unilateral, the symptoms being those of renal pain and possibly tumor. If physical signs be obscure, puncture may be employed, to be followed by lumbar incision and drainage when the exact situation of the abscess is made out. Perinephritic abscess is a collection of matter in the tissues immediately surrounding the kidney; it is very often diffuse, spreading in the subperitoneal fatty tissue and the sheaths of the abdominal and retro-peritoneal muscles. The treatment is free incision and drainage.

Gravel and calculus are the most common causes of all the diseases we have been considering, but although they are usually the cause, they may be in some instances the effect, being induced by the retention of urine too long in the kidney, as in movable kidney and hydronephrosis, which results from some abnormality in the ureter. Renal calculus is most common in

the young and after fifty years of age, urate of ammonium and uric acid being, according to Taylor, the most common nuclei in the respective periods. The oxalate or mulberry calculus, though not so common, is undoubtedly the one which causes the most severe symptoms and sufferings. All the varieties of renal calculus are susceptible of surgical cure by incision and removal.

The most common and important symptoms are pain in the loins and back, often shooting down the ureter into the testicle in the male, and into the ovary in the female, and into the hips, thigh and knee, aggravated by motion, especially if it be of a rough or jolting kind; hæmorrhage, which is especially liable to follow such rough movements, the urine when passed being either smoky, bright red, or coffee-colored; and the presence in the urine of crystals, or of small fragments of the calculus. In more advanced cases the presence of pus in the urine with irritability of the bladder, especially at its neck just after the act of micturition, are common. To these local symptoms must be added a number of reflex phenomena, especially disturbances of the digestive organs, indigestion, nausea, retching, vomiting, and flatulence. The latter being often markedly troublesome in the colon on the affected side, sometimes amounting to actual intestinal colic, is in the experience of Mr. Thornton, one of the most common and early symptoms in the majority of cases, and is one which is very apt to be overlooked and misunderstood. This intestinal colic frequently precedes and is apt to mask the true renal colic caused by the passage or attempted passage of a calculus down the ureter. It must be borne in mind, however, that most of these symptoms may be present in a case in which no stone can be found, and they may be markedly and constantly referred to one side whilst the stone is in the kidney on the opposite side—a sympathetic transference of pain from a diseased organ to its fellow, which Mr. Thornton had frequently observed in the ovary before he had any experience in renal surgery. It is not uncommon for the stone to become fixed in the ureter just at its entrance into the bladder; in one such case in which the kidney had become pyonephrotic and disorganized, Mr. Thornton removed it and left the stone, with a perfectly successful result.

Calculus suppression of urine can arise from the blocking of one ureter, the opposite kidney and ureter being quite healthy. If one ureter be blocked and the kidney on that side enlarged, temporary relief may be obtained by puncture in the loin, but if there be any doubt as to which is affected, the only proper course is immediate abdominal section by Langenbuch's incision, through which both kidneys can be explored, and the further surgical procedure found necessary can be aided. The stone, if found in this way, should not be extracted through the peritoneum, but through a counter opening made in the loin; or if it be close above the bladder, suprapubic lithotomy should be done, and the stone extracted in that way. For the certain detection and removal of a renal calculus, Mr. Thornton prefers to open the abdomen by Langenbüch's incision over the suspected kidney, having examined carefully both kidneys and ureters, and having found a stone, he employs one hand in the peritoneum to fix the kidney and stone and to guard the colon, while with the other he cuts down upon the stone directly in the loin, merely making an opening through the loin tissues large enough to introduce the finger and the necessary forceps for the extraction of the stone.

The loin incision does not interfere with the peritoneum and no wound is made on the peritoneal surface of the kidney; it is much smaller than the ordinary lumbar incision, requires no sutures, does not leave a weak place in the loin with the chance of hernia, and it admits the necessary drainage tube through a small channel without risk of extravasation of urine into the tissues around the kidney, or the troubles of secondary suppuration. Another advantage in the combined operation is that we make sure the patient has the usual allowance of kidneys; there is the advantage of being able to ascertain the condition of both kidneys and of both ureters. Mr. Thornton holds that the increased risk, due to opening of the peritoneum is practically *nil*, provided the surgeon will take pains to perform a thoroughly aseptic operation. When the operator is convinced that no stone remains, the kidney should be well flushed out with warm 1-2000 corrosive sublimate lotion. One or more drains are then introduced up to the kidney but not into its interior, and a few inter-

rupted points of suture and a large absorbent antiseptic dressing complete the operation.

Mr. Thornton then briefly describes the pathology and treatment of simple and hydatid cysts of the kidney, and discusses the clinical history and results of treatment in so-called scrofulous and tubercular kidneys; he asks, "Is it not possible that there are cases in which the lining membrane of the pelvis of the kidney, a part specially exposed to irritations likely to produce pathological change, may be primarily and for a time solely attacked?" Bearing in mind the results of incision and drainage in some cases of peritoneal tubercle, a similar treatment may be able in this instance also to arrest the disease whilst still local. In cases in which it is advisable to employ puncture, never under any circumstances use for the purpose that "surgical abomination," a grooved needle, for it will allow infiltration or infection of all the tissues through which it brings the fluid. Always use a thoroughly aseptic trocar and cannula with Listerian precautions, not forgetting the now too often discarded spray.

Mr. Thornton is one of the few who remain faithful to the spray after even Lister himself has abandoned its use. The spray keeps a moist antiseptic atmosphere over everything, and thus renders the use of sponges more efficient in thorough and rapid cleansing of the wound and its surroundings than is possible if the same parts are dry, and the germs of infection are delivered over to the tissues weakened by being soaked in a strong antiseptic, which though perhaps not killing them, renders them a much easier prey to the active leucocytes. Mr. Thornton summarizes in his paper the indications for and the method of carrying out various surgical procedures for the relief or cure of renal disease; he emphasises the necessity for the employment of every protection that antiseptics can give.

Mr. Thornton would restrict the use of puncture as follows:

1. To decide in doubtful cases between solid and fluid tumors of the kidney. 2. To relieve painful distension when nephrotomy for some special reason is not at once advisable or possible. 3. To remove urine, or serum, or pus from a very large tumor, to reduce its bulk during the performance of nephrectomy. 4. As a tentative attempt at cure in some cases of simple cysts or of hydronephrosis, though the chance of cure is very slight. 5. To localize the position of renal or circum-renal abscess when the physical signs are not clear enough for free incision. In such cases to be immediately followed by free incision when the pus is found. 6. To gain time and relieve the harmful tension in some cases of calculous suppression.

He would restrict the use of nephrotomy: 1. To cases of calculous suppression in which incision seems preferable to mere puncture with the chance of being also able to remove the stone, *i.e.*, if further experience shows that this is a safer and better operation than my combined method. 2. For the cure, by subsequent drainage, of simple cysts, abscesses and hydatids; the question of possible cure in some cases of hydronephrosis to be further tested. 3. For the cure, by subsequent drainage, of traumatic pyonephrosis or pyelitis and in the early stages of tubercular suppuration. 4. For the possible cure of more advanced calculous or tubercular suppurations when the patient will not submit to nephrectomy. 5. For the performance of nephrolithotomy in some cases, if extended experience shows that this procedure possesses any advantages over the combined method or when those who have no experience in abdominal surgery are compelled to operate.

FOODS FOR INVALIDS.

In a discussion on Foods for Invalids at the last meeting of the British Medical Association, Dr. Burney Yeo spoke as follows:

We feed fevers, and we are undoubtedly right in so doing. Bauer and Künstle appear to have established, by careful observations on the diet of typhoid patients, the fact that a due "supply of albuminous food to a fever patient" effects a saving of albumen in the body, "for though the excretion of nitrogen is increased, the loss of the same element from the system is reduced." But do we not sometimes overfeed fevers, and use less discrimination than is desirable in the kinds of food we administer?

It has appeared to me that we may formulate two chief rules which should guide us in the feeding of cases of acute disease: 1. Endeavor to utilize food to the greatest extent that is safe and possible for the purpose of checking the

waste of tissue which is associated with the febrile process. 2. Be careful to administer no food that cannot be readily absorbed and assimilated. Do not overlook the fact that the functions of the digestive organs are gravely impaired during fever, and, therefore, if we give food which the patient is unable to assimilate, this undigested food will decompose in the stomach and intestines, and cause much local irritation and augment the pyrexial movement.

I have been accustomed to teach, and I submit that teaching to your criticism, that in acute and short typical febrile attacks, such, for instance, as one of acute croupous pneumonia of average severity and running an average course, we should not manifest any anxiety as to the taking of much food, unless in the aged and feeble, for in forcing the consumption of a considerable quantity of food in such cases, in the absence of all appetite, and with obvious febrile derangement of the digestive organs, we do more harm than good.

There is a general consent amongst all authorities that, owing to the interruption of normal gastric digestion in fever, all food should be given in the fluid form, that is, in a form that can be readily and immediately absorbed, that it should be given in small quantities and at short intervals. The two kinds of fluid food most commonly used in cases of acute disease are, first, milk, and secondly, beef-tea, and under the latter denomination I would ask to be allowed to include all fluid meat extracts, broths, soups, meat juices, etc. The consideration of both these forms of food will probably yield some suitable topics for discussion.

The very great convenience of milk as a food has, I think, acted, in a certain sense, as a snare, for there is a tendency, especially with nurses, to think no evil of that which is so handy, requires no preparation, and gives so little trouble. But the great drawback to the use of milk in acute disease is in the fact that, although a fluid food out of the body, it becomes a solid food in the stomach or intestine. No doubt it is an excellent food in all cases in which it is well tolerated and quickly digested and absorbed, but there are many cases in which this is not so, and when these happen to be cases of typhoid fever very serious injury may be done the patient if this peculiarity is not observed. I have seen several cases of typhoid in which the administration of milk has not appeared to cause any gastric disturbances, but yet has produced great intestinal irritation, and the motions have been largely composed of firm milk curd. One of the reasons why milk so frequently disagrees with patients is that it is given in too concentrated a form and in too great quantity.

Sir Henry Thompson has called attention to the absurd custom, now so prevalent, of using milk as if it were a simple beverage, and to drink it like water, with quantities of solid meat and other food. Why should we hesitate to dilute the milk we give to fever patients? They require water, pure water, in much larger quantity than they usually get, and yet we hesitate to mix water with the milk we give them. Their digestive powers are excessively feeble, and yet we will give them concentrated foods! When we wish to rely on milk as a food in acute disease we should give it in small quantities at a time at short intervals, mixed with water, or, better, with an alkaline water, such as Vichy or Apollinaris. I am accustomed in hospital practise to prescribe powders, each containing twenty grains of bicarbonate of soda and twenty grains of common salt, and to direct that one such powder should be added to every pint of milk, and this is to be diluted when administered, with an equal quantity of water. Two ounces of milk and two ounces of an alkaline water every hour (and a fever patient requires a drink every hour) will give the patient two pints and a half of milk a day. I am, of course, thinking of cases in which the digestion of milk is difficult.

Greater use ought also to be made of whey in those cases in which milk is not digested readily. I have often used it in private practice and in hospital with great advantage. It can be prepared in a pleasant form by boiling a pint of milk with two or three teaspoonfuls of lemon-juice and a few fragments of lemon-peel for the sake of flavour; if the curd be well-broken up, then strained through muslin, and all the fluid pressed well out of the curd, much of the cream and some of the finely-coagulated casein will pass into the whey, which will thus become a fairly nutritive fluid. If necessary, it can be made more nutritious by the addition of meat juice. Or if an egg be whipped up with twice as much boiling water, added slowly, and then

strained, a fluid will be obtained holding in suspension a considerable quantity of albumen coagulated in fine particles, and this may be added to whey (or to beef-tea), thus supplying the defective albuminate.

I must not dwell longer, however, on milk. I merely make these suggestions with the view of eliciting further observations. I will ask you at the same time to consider the use of "buttermilk" as an invalid food, not so largely used in this country as in Germany, but calculated, I believe, to be of service in many cases of gastric difficulty. It is highly acid from the presence of lactic acid, and it contains the casein of milk in a very finely divided form. I have known dyspeptic patients live upon it in comfort for considerable periods at a time, taking only a little thin water biscuit besides.

Another form of fluid food very extensively used in cases of acute disease is "beef-tea;" this term is usually applied to very strong extracts of beef, and this fluid is generally estimated in exact proportion to its concentration. Why, I have never been quite able to understand. As I have already said, a patient with pyrexia requires and should be given much water; why not give him some of that water with his beef extract? The intense dislike of beef-tea which many patients manifest is especially directed to this very concentrated form. It is mere slavery to routine—mere want of resource—that has perpetuated the invalid's sad restriction to milk and beef-tea. Conceive the dread monotony of a six or seven weeks' limitation to these two articles of diet. Now, there are many forms of meat infusion or meat extracts that can be rendered very palatable by suitable care in preparation, infinitely better adapted to serve as foods in pyrexial cases than strong beef-tea. Well-made mutton, veal, and chicken broths, to which some well-strained oatmeal or barley gruel can be occasionally added, make excellent invalid foods. They contain in a dilute form the same constituents, and, with the additions I have named, even more nutritive alimentary principles than beef-tea. But clear soups—*consommés*—are exceedingly agreeable, readily absorbable, and stimulating foods, and they usually contain some vegetable juices and salts which greatly add to their food value.

Sir William Jenner some time ago directed the attention of the profession to the remarkable oversight so frequently practised in the feeding of cases of fever, of the omission of vegetable juices from their dietary. It is quite easy to obtain the juice of fresh boiled vegetables and savoury herbs, and to add to these clear animal soups. "Fruit soups" are used in Germany, and are made by boiling fresh or dried fruits with water, expressing the juice and straining.

I am not one of those who think ill of beef-tea as an invalid food, but I object to making either beef-tea or milk the universal invalid food and I see no reason why we should desire to use such very concentrated beef-teas, when we know that fever patients need so much water. I regard beef-tea as an excellent stimulant and restorative as it contains very little, if any, albuminates in solution. But it contains gelatin which is very readily digested, and appears to serve as an "albumen-sparing" food in the body, as well as saline and stimulating extractives.

I was greatly surprised a short time ago on being told by a hospital sister, that in the hospital she nursed in they were forbidden to put any salt into the food of the typhoid patients. Surely this was a very unwise regulation. If chloride of sodium is so important in health, may it not be quite as important in disease?—*Brit. Med. Journal.*

CURES; SCHEMATA OF TREATMENT; AND THERAPEUTICS IN GENERAL.

No. 1.—*The local treatment of Psoriasis.*

My favorite prescription for psoriasis is the following

℞—Acid., Chrysophanic,	gr. x.
Liq., Carbonis Deterg.	(Wright's) m x.
Hydr., Amm.-Chlorid,	gr. x.
Adip., Benzoat.,	℥j.

Misce fiat unguent.

The patient is instructed to remove all scales as much as possible, either by washing or a warm bath, and then to spend half-an-hour (before a fire if the room be cold) in rubbing this ointment into all patches. It is better to leave the ointment on all night, but if this is, for any reason, too disagreeable, it may be wiped off (not washed). In the morning a bath with soap is taken. In most cases I prescribe arsenic, along with the local treatment, as helping the cure, and

tending to make it more permanent, but I rely chiefly on the ointment, and sometimes use it alone. I have published a portrait, in which it was used on one side of the body only, while arsenic was given internally, the result being the disappearance of the eruption on the parts treated locally, whilst it still persisted on the others. This experiment was conclusive. It will be observed that the quantity of chrysophanic acid is but small, and I may say that I often prescribe a yet weaker ointment. Strong ointments both irritate and stain much more, and I not unfrequently the patients naturally refuse to continue them. With this ointment there is but little risk of inconvenience, and patients rarely complain much of the staining, especially if they are allowed after a prolonged inunction to rub it off at once. This formula has been for many years in constant use at the Blackfriars' Hospital for Skin Diseases, and gives great satisfaction. I believe that the tar solution often has a material affect in preventing staining. As years go on I find that I prescribe arsenic with increasing caution, and rely more and more upon local treatment of the kind indicated.

As an illustration I will quote the experience of one of the last psoriasis patients whom I have seen. Mrs. A—— consulted me in June, 1888, for common psoriasis, from which she had suffered for twelve years, and for which she had had much specialists' treatment. I ordered arsenic and the ointment above mentioned. I did not see Mrs. A—— again for ten months. She then came to report that the ointment was so effectual that she had long ago left off the mixture. Her experience was that two weeks of the ointment always removed the patches, and that after a six weeks' interval they would usually begin to threaten again. At the time of her visit her skin was absolutely free. The ointment she said always left her skin brown, and it took a week or more for the discoloration to wear off. Then followed a month of a perfectly clean skin, and then a few spots would again show themselves. Thus she could always keep the eruption in check, though it was never permanently cured. This, I fear, is almost as much as we can expect in most cases of pasoriasis. With perseverance, however, the relapses become more and more slight, and the intervals longer, so that in the end the disease is virtually cured. The reverse is the fact if psoriasis is neglected.

No 2.—*Simulation of Hodgkin's Disease in Syphilis (?) Immense glandular tumours removed under Iodides. Does a cure by specifics prove specific nature?*

I find in Dr. Mc'Call Anderson's interesting brochure, just published, on "Syphilitic Affections of the Nervous System," a very noteworthy example of the cure of an immense glandular tumour by iodide of potassium. Not only is the case important as an instance of recovery from a very formidable complaint, but because it raises the question as to how far we are justified in regarding recovery under the iodide as proof of the syphilitic nature of any malady so cured. The case was one which was at first considered to be Hodgkin's disease, the patient, a man of thirty-five, apparently in "perfect health," having enlarged glands in both sides of his neck. The tumour on the right side is described as "enormous," and as having first commenced two years ago behind the ear. Not only were the cervical glands enlarged, but those also in the axillæ and inguinal regions. On the right side the tumour extended from the middle of the neck to several inches below the nipple, and measured fourteen inches in length, and ten in width. It was crossed by enlarged veins, and at parts the skin was reddened. The patient had been accustomed to laborious work, and had drunk freely; he was, notwithstanding, "well nourished."

In the belief that the disease might be syphilitic, iodide of potassium in large and increasing doses was ordered, and the man was advised to abstain from all labour. The salt was commenced in doses of ten grains, and increased to thirty three times a day. It was begun on the 29th of January, and the improvement was almost immediate. On the 12th of July, Dr. Hugh Cunningham, of Dumfries, who was in charge of the patient, wrote, "You will be glad to hear that the tumours have almost entirely disappeared, scarcely a vestige of any of them now exists."

We have, then, in this case, a clear and definite instance of recovery from a general tendency to enlargement of the lymphatic glands, under the use of the iodide of

potassium. Does the cure by this remedy prove that the disease was syphilitic? I cannot think that it does. I have never seen enlargement of lymphatic glands advancing to the condition described in this case in connection with syphilis; and further, the evidence of the man having had syphilis at all is very slight. The case is, in all its features, a typical one of lymphadenoma; in other words, of general infective enlargement of lymphatic glands without tubercle. We must remember that iodide of potassium and iodine gained repute in the first instance as remedies for enlargements of glands. It was only after their credit had been well established for this disease, and for bronchocele, that they came to be employed for syphilis. In making these remarks, I by no means wish to be considered as expressing an opinion that the disease in question was not syphilitic. I merely raise the doubt, and demure to the doctrine that the mode of cure proves the nature of the disease. Whatever the latter may have been, the fact of the cure is of great interest, for we are not accustomed to see any form of lymphadenoma yield so quickly and definitely to treatment. More usually this malady resists all our remedies.

No. 3.—*Arsenic as a cause of Herpes Zoster and of Dull Eyes.*

I prescribed arsenic, in very full doses, for Mrs. H——, in order to cure psoriasis of the nails. It was effectual; and she took it regularly for several months. In March, 1888, she reported to me that about the previous Christmas she had suffered a most severe attack of shingle on the right side of her chest. Her surgeon, in Yorkshire, where she was, had told her that he had never seen a case with so much inflammation. Fortunately for me he had not suggested to her any suspicion as to its having been caused by the medicine. The latter was, however, discontinued, as Mrs. H—— was suffering from a

In this case, my patient was strongly of opinion that the arsenic did not improve her personal appearance. She was greatly distressed by the state of her nails, and willing to do anything for their cure, but she thought that the arsenic made the whites of her eyes look thick and a little yellow. The blue of the sclerotic, which in her showed through, did not do so as much as usual. A friend who lived with her had assured her that the medicine made her eyes look dull, and that the blue iris became more grey. I could myself somewhat confirm this impression, for Mrs. H—— certainly looked older, and had a less brilliant complexion than formerly. She was naturally fair and florid. The nails, which had got well when the drug was pushed, had somewhat relapsed during the two months during which it had been left off. The arsenic had not disagreed in any other way.

By several observers cases have been published in proof that in some obscure manner the skin may be made muddy and dull by the medicinal use of arsenic. I have myself given an extreme illustration of this in the Pathological Transactions for 1888. In this instance the skin became earthy and brown, and in some places took on the conditions of psoriasis. Pricking of the eyes and redness of the conjunctiva are also well-known results. The patient whose case I have given above is, however, the first who has complained of objective dulness of the eyes. She was an acute observer, and so was her companion, and I have no doubt they were right. It is quite certain that arsenic does affect the nutrition of all the tissues and produce changes, it may be very minute at first, concerning the precise nature of which it is difficult to give any explanation. In arsenical herpes zoster we have a definite form of peripheral neuritis, but it is far from being the only disturbance of nutrition which we witness in connection with the use of this powerful drug.—*Archives of Surgery.*

TWO CASES OF RUPTURE OF THE ŒSOPHAGUS.

Formad:

Case I.—J. B., white, male, aged 59, labourer. He, with others, had partaken of a hearty meal at 12 o'clock. Shortly afterwards all were taken ill, and all vomited except him. He was treated for intestinal colic. At 7 the suffering had become greatly intensified. The pain was griping, burning, and tearing in character, and situated in the epigastric region. Pulse rapid and weak. Temperature 98°, dyspnœa extreme, great thirst, countenance

cyanotic and pinched, nausea most intense, efforts at relief being frequently made by thrusting the fingers down the throat. This *singular condition* existed, viz., external emphysema under the right eye, over whole of left cheek, and down the neck to three inches below the clavicle. This rapidly spread, till both sides became equally involved. It was being apparently produced by the attempts to vomit. These efforts continuing, mustard was given by the mouth and apomorphine hypodermically. Fifteen minutes before death, the patient being unconscious, a stomach tube was introduced with the greatest care and delicacy. It met with no obstruction, and three-fourths of a pint of half digested food was removed. At 9-20 death took place.

Autopsy.—Body medium in size and lean. No external marks except prominent emphysema and congestion of subcutaneous tissue of neck. Left *pleural* sac filled with fluid, containing the contents of the stomach; right, empty. *Pericardium*, normal. *Heart*, hypertrophied. No valvular disease; no atheroma. *Lungs*—left, much congested, collapsed; right, œdematous. *Œsophagus*—on dissection a rupture was seen in the lower part of its left side, immediately above the cardiac end of the stomach, and just above the border line where the squamous covering of the mucous membrane of the œsophagus fades into the stomach. The tear, before its removal, was about one half-inch in length and longitudinal, and as the dissection had been performed most carefully, there was no reason to doubt that it was a rupture. The mucous and other coats, normal. No evidence of stricture or ulceration. Diaphragm perfectly intact. *Stomach*—mucous membrane was mammilated and thickened; a few ecchymoses, caused by the strain in vomiting. Rest of organs normal.

Case 2.—J. P., German, male, aged 36, baker. Intemperate. Never sick and never had missed a day's work in his life. While at work he was suddenly seized with dyspnœa, colic in epigastrium, swelling of the neck, and hæmatemesis. Unable to move, and enormous emphysema of neck and upper part of chest. The dyspnœa and pain increased greatly, and death took place in a few hours.

Autopsy.—Body of medium size, muscular, fat. Emphysema of neck and chest very marked. *Thorax*—left pleural cavity full of liquid which had induced complete atelectasis of left lung. Fluid contained contents of stomach. Right cavity contained little fluid, and the lung was highly distended, congested, and œdematous. *Pericardium and heart* normal. Diastolic arrest, showing all the chambers filled with red clots.

The *œsophagus* showed a tear anteriorly, just above the cardiac end of the stomach. It was about two inches long and in the long axis of the tube. Edges clean cut, but there was no doubt that it was a rupture, because the contents of the stomach were seen in the pleural cavity before anything else was disturbed. T. W. BUTCHER, in *Phil. Univ. Med. Mag.*

NOTES ON HERNIA IN INFANTS AND YOUNG CHILDREN.

Miller:—

In very young children there are two principal forms of abdominal hernia, the *umbilical* and the *inguinal*. The former is the most feared by mothers, and the excessive care taken to prevent it is sometimes a cause of the *inguinal* variety. In addition to the commonly recognised causes of umbilical hernia, mention is made of a practice some nurses have of rubbing the scar left by the newly fallen cord, in the idea that by so doing they are strengthening the part. The author holds that closing of the orifice is thus delayed, and that as it brings about violent fits of crying, a hernia may readily form there. Then as to inguinal hernia, he attempts to prove that it is often produced by anxious mothers binding the abdomen very tightly, to prevent the umbilical form. For as this will necessarily interfere with the respiratory function, and disturb the action of the bowels by the compression, the child will be constantly crying, and will suffer from constipation, and irritative diarrhœa, thus causing much straining. As regards treatment Dr. Miller recommends for the umbilical form a modification of the ordinary pad and bandage; its essential points being, that it is as firm as can be worn with comfort, sufficiently large to protect well the borders of the orifice, and at the same time not so much so as to penetrate within the rings, and thereby prevent their

closure. He takes an old-fashioned button mould, and covers it thickly with soft muslin. This is then sewed firmly to three strips of plaster, each 6in. to 8in. long and ½in. wide, about equidistant from the ends. It can be worn for a few days, then changed slightly in position to prevent irritation, and then back again, thus allowing its continued use, even in very fleshy children, over a long period. The method advocated for inguinal hernia is the one brought forward by Mr. Pye—*i.e.*, by means of a skein of worsted, one end of which is placed over the ring, the rest being passed horizontally across the abdomen, over the line of the crest of the pelvis, to the opposite side, around the hips, behind the pelvis, and over the hip on the side of the hernia. The end is then passed through the loop of the skein, and will here form a knot, the bulging portion of which must be carefully adjusted so as to be against the hernial opening, and, being carried down to the upper part of the thigh, it is then brought around the external side near to the great trochanter, and there tied or fastened with a safety pin.—T. W. BUTCHER, *New Orleans Surg. and Med. Journal.*

EXTIRPATION OF THE PANCREAS AND DIABETES.—At a recent meeting of the Société des Sciences Médicals, of Lyons, M. Lépine presented four anatomical specimens from dogs from which he had removed the pancreas. In the first case when the operation failed, there was peritonitis from perforation caused by gangrene of the duodenum. The second dog presented no glycosuria during all the time it survived; but at the autopsy it was found that part of the pancreas, perhaps six grammes of the gland, remained. This fragment had no connection with the duodenum. This dog which had no glosuria, had, according to the analysis of M. Barral, hyperglycæmia, about two grammes of sugar per kilogramme of blood. The third dog presented no glycosuria for the first three days; then after it had been given some soup, there appeared suddenly five grammes of sugar per litre of urine. Two hundred grammes of glucose having been administered, fifty grammes of sugar per litre of urine were found the next day, and this intense glycosuria persisted until the death of the animal. At the autopsy only two grammes of pancreas were found in place. The fourth dog survived twelve days; and during this whole period it passed from forty to eighty grammes of sugar daily. Examination of the blood by M. Barral showed an enormous hyperglycosuria, eight grammes of sugar per litre of arterial blood. M. Lépine called attention to the influence of antipyrin on dogs that had been made diabetic; antipyrin, in fact, diminished the sugar, as shown by the reduction of Febling's solution, and especially the polarimetric deviation. The dogs experimented on always had polydipsia. They did not seem to be in a condition to survive the operation very long; the last one was killed on the twelfth day, but it was dying. —*Lyon Médical, December, 1889.* G. A.

A POINT IN THE ETIOLOGY OF SUDDEN DEATH.—A note under this heading, and signed by the initials H.C., appeared in the *Lyon Médical* of December 1st, 1889, and is interesting in connection with the communication made to the Pathological Society of Toronto at a recent meeting by Prof. Welch, of Johns Hopkins University, a report of which is to be found in the CANADIAN PRACTITIONER of January 1st, 1890. The following is a translation: "The pathological anatomy of sudden death is far from having had its last word, and the expert, in spite of a careful autopsy, may sometimes fail in the discovery of lesions sufficiently evident to carry conviction. Thus every method for more precise investigation of such a subject ought to be welcome. We believe therefore that it will be of service to our readers to call attention to an important work published some time ago, but in two journals which are certainly not familiar to them—the *Nordisk Medicinsk Arkiv*, of Stockholm, and the *Vierteljahrschrift für gerichthlitbhe Medizin*, of Berlin. The author is Dr. Krey-Aberg, professor of legal medicine in the School of Stockholm. Dr. Krey-Aberg in this work has studied exclusively *chronic endarteritis as a cause of sudden death.* He has been enabled, thanks to material accumulated at the Medico Legal Laboratory of Vienna, which was put at his disposal by Professor Hofmann, to make extensive inquiry on this point. Reports of 852 autopsies in cases of sudden death in subjects over fourteen years of age, between the 1st of June, 1881, and the 1st of June, 1886, have

been the basis of his researches. He has observed that in the enormous proportion of 74.5 per cent. death was caused by chronic deforming endarteritis, acting either directly, or by consecutive lesions; the direct causes of lesions; the direct causes of death were—paralysis of the heart in 52.7 per cent.; rupture of that organ in 1.7 per cent.; rupture of aneurism of the aorta, or of its immediate branches in 6.4 per cent.; rupture of the aorta in 1.9 per cent.; intra-cranial hæmorrhage, to which must be added a single case of embolism of the central arteries, in 11.3 per cent. Contrary to most general statistics of sudden deaths the maximum of frequency of these cases connected with a lesion of the circulatory apparatus is found between forty and forty-four years of age; the predominence of the male sex is very marked, especially for cases of cardiac paralysis associated with endarteritis without any other lesion. Tables have been drawn up showing all these points, as well as the seasons in which these deaths took place. For more simple details you are referred to the text of Memoire, and we draw attention here only to the last part of the work of our distinguished confrére, certainly the most original. It bears upon the roll which chronic endarteritis of the coronary arteries with stenosis of their aortic orifice plays in the pathogenesis of sudden death by arrest of the heart. In thirty-three cases examined by him from this view he recognized this influence in twenty-two. Finally he has related specially in detail thirteen autopsies in which he sought particularly for the relation of coronary arterio-sclerosis to alterations in the myocardium. The latter lesions were absent only in four cases; in all the others he noted softening and fatty degeneration rarely very extensive, more often limited, sometimes having its seat only in the papillary muscles, and having relation to the zone of vascular irrigation of a particular arterial twig. These anatoma-pathological results are obtained after minute search, but we do not think that the author has exaggerated their pathogenic importance. He has been able to apply them in several medico-legal cases where the autopsy otherwise would have been negative, among others, in the case of the sudden death of his regretted predecessor in the School of Stockholm, Jaderholm." G.A.

Therapeutic Notes.

Prof. Bartholow recommends for habitual constipation, a few minims of wine of tobacco, taken at bedtime. It acts by increasing the secretion, and causing peristaltic action.—*Coll. and Clin. Record.*

TREATMENT OF NIGHT SWEATS OF PHTHISIS.—Rosenbach recommends the application of a bladder filled with ice over the abdomen for several hours during the night. This treatment is well borne by patients, and is more successful than treatment by atrophine and other agents.—*Lyon Médical.*

PILLS FOR COUGH.—N. Gueneau de Mussy.

℞.—Picis liquidæ	gr. xxx.
Pulv. Ipecac. Co.	gr. xlv.
Pulv. Benzonii	q.s.

H. massa secundem artem, *et* divide in pil. No. xl.

Sig.—Two to six pills daily in cases of emphysema or chronic bronchitis, when the cough is frequent and rebellious.—*L'Union Medicale*, Nov., 1889.

TREATMENT OF PIGMENTED SPOTS OF PREGNANCY.—M. V. Monier advises the following ointment in the various pigmentations and chloasma of pregnant women:

℞—Ol. Theobrom	
Ol Ricini aa	℥ij ss
Luici Onidi pur.	gr. v.
Precip. alb.	gr. ij.
Ol. Rosæ	g.s.
M. Ft. unguentuem	

Sig.—To be applied night and morning.

—*Bulletin Médical.*

TREATMENT OF TYPHOID FEVER IN CHILDREN BY NAPHTHOL.—In imitation of the method employed by M. Ch. Bouchard in adults, one may, as M. Legroux has done, prescribe naphthol for young typhoid patients. This treatment is carried out as follows:

1. As soon as the disease is evident, prescribe a calomel purgative, 5-10 grains, to be taken in two doses.

2. Two days afterwards give naphthol alone,

or associated with salicylate of bismuth, or salicylate of magnesium.

If there is *moderate* diarrhœa, give every hour one of the following powders :

℞—Naphthol B gr. xxx.
H.S.A. et. div. in pulv. No. x.

If the diarrhœa is *profuse*, give at intervals one of the followiug :

℞—Naphthol B
Bismuthi Salicylatis aa gr. xxx.
M. et. div. in pulv. No. x.

S—The 10 powders to be taken in 24 hours.

3. If there is constipation, replace the salicylate of bismuth by salicylate of magnesium, and administer in the same way :

℞—Naphthol B
Magnesii Salicylatis aa gr. xxx.
M. et. div. in pulv. No. x.

—*Gaz. hebd. de méd. et de chir., Lyon Médical.*

TREATMENT OF DYSPEPSIA.—There are ptomaines which are formed in the stomach as the result of the fermentations which the food often undergoes ; hence it is a therapeutic indication to prevent these fermentations, and destroy these toxic substances. This may be done by using saturated chloroform water, which is possessed of antiseptic properties, preparations of naphthol and salicylate of bismuth, according to this formula of Bouchard's:—

℞.—Naphthol B. ℥iss.
Bismuthi Salicylatis ℥iii.
M. et. div. in capsulis No. xxx.

Sig.—One capsule with each meal.

Here are two other formulæ which have been frequently employed :—

℞.—Naphthol B.
Bismuthi Salicylatis.
Magnesiæ aa gr. lxxv.
M. et. div. in capsulis No. xx.

Sig.—One capsule immediately before each meal.

Or

℞.—Bismuth Salicylatis.
Magnesii Salicylatis.
Sodii Benzoatis aa gr. lxxv.
M. et. div. in capsulis No. xx.

Sig.—One capsule immediately before each meal.—*Bull. Méd.*, Oct., *et Lyon Méd.*, Nov., 1889.

THE
Canadian Practitioner

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TORONTO, FEBRUARY 1, 1890.

LODGE PRACTICE.

We have received a letter from a subscriber containing questions which we can scarcely answer without making some remarks on the subject of lodge practice. We consider it exceedingly unfortunate that such practice has become so common in many of the cities of Ontario, including Toronto. We must, however, admit that custom and usage have sanctioned it to such an extent as to make it reputable and respectable, and as a consequence there is no stigma attached to the character of a physician who does contract work. So general has this practice become that many of our young graduates are practically driven into it in self-defence, and in distinct opposition to their scruples and objections to it.

One of the worst features connected with it is that the doctor who "takes a lodge" becomes the servant of that lodge, and thereby must, to some extent at least, lose his independence. The system is radically wrong, and interferes with the principle that the surgeon or physician should be the sole judge of the number of visits he is required to make, should receive a proper remuneration for the work that he performs—no more, nor no less. Unfortunately in the practical working of the system some worse features frequently appear—such as "touting" for lodges, electioneering for positions in them, and sometimes actually under-bidding opposing candidates. There is certainly nothing very dignified in an election of this kind between two or more practitioners.

Apart from what may be said for or against the system we have no doubt that the general

tendency is to degrade the profession. The lodge doctor gets into a groove which as a rule effectually prevents him from reaching any eminence in his profession. Many whom we know have very soon recognized this fact after a short trial at the business; have given up lodge work as soon as possible.

Under the present existing circumstances, no matter how much we may deplore them, we have no desire to throw any stones at lodge doctors. We fully realize the peculiar conditions surrounding them, and think they have a perfect right to adopt a system which professional opinion has legalized from an ethical standpoint. We hope, at the same time, that before long a change in this respect will take place, and that physicians will unite in a strenuous effort to do away with lodge practice entirely.

Our correspondent has given us particulars of a case which we will epitomize as follows: Dr. A. is surgeon of a certain lodge; Dr. B. becomes a member of the same lodge, and is proposed as a candidate in opposition to Dr. A., at the regular annual election of the lodge, and is elected. We are asked if Dr. A. has any grievance against Dr. B. because of the election of the latter. Our answer is simply no. The members of the lodge must be considered the proper judges in such a case, and their decision should be universally accepted.

HOSPITAL CONSTRUCTION AND HOSPITAL MANAGEMENT.

The proposed construction of a new Hospital in the Queen's Park, Toronto, has received the most kindly encouragement from the daily press of our city. The munificent donation of Senator Macdonald has been highly appreciated by all classes in the community. A very able and sensible editorial which appeared in the *Evening Telegram*, deserves more than a passing notice. This paper, in speaking of this gift says: "God bless the benefactor of universal humanity, for in his kindly act he not only exemplifies the Master's teaching, but presents an example to some of the many rich men of Toronto who hold their purse strings with a tight hand." It goes on to speak of the actual necessity for the erection of such a hospital, in consideration of the fact that our present accommodation for the sick poor is not sufficient to meet the demands.

The *Telegram* is anxious that the new hospital should be in all respects equal to the most modern hospitals of America, and fears that it might be an error to utilize or modernize any old building for the purpose. We cordially endorse the desire that the new buildings should be erected with all the latest and best facilities that are known in modern hospitals, and we have reason to believe that the trustees, who have been appointed to carry out Senator Macdonalds views, are fully impressed with the great importance of these considerations. Some of those interested in the undertaking have, in company with a competent architect, visited, and carefully examined, the best hospitals in the United States, and we feel certain they are not likely to make any mistakes. Whether the building, at present known as Wycliffe College, can be retained as one of the group of buildings, which it is hoped will be erected in the near future, we know not. It is to all intents and purposes a new building, well and substantially constructed with some fine lofty rooms, well lighted, well ventilated, well plumbed, and well drained. It is thought by some that it can very easily be utilized, especially for the executive work of the hospital, and that a number of pavilions with wards of various sizes can be added in such a way as to make the institution complete for its purposes in all respects. This is one of the matters of detail which is now being very carefully considered.

The *Telegram* thinks that the management of the new hospital should be entirely separate from and independent of all other institutions, and that the rivalry and competition thus established would be productive of good. We are not prepared to express a decided opinion on this point, but we think the suggestion is in some respects a good one. Much, however, will depend on circumstances, and from an economical point of view, it might be advisable to make the new institution part of the general hospital system of the City. As far as the executive work is concerned it is about as easy to look after 600 beds as 300. Small hospitals are placed at a great disadvantage in many respects, and as a consequence do not com-

mand the confidence of the public as the large ones do. In the present case it is in any event important that there should be some sort of an understanding with the General Hospital, by which the two institutions will work together, because it is understood that no patients suffering from contagious or infectious diseases will be admitted into the new hospital.

We hope the all powerful press of Toronto will continue to extend a warm and generous support to the new charity, and we believe that a full and friendly discussion on the methods of construction and management is quite in order, and is likely to be beneficial.

THE OPERATION FOR ŒSOPHAGOTOMY.

This operation for the removal of a foreign body is one rarely performed. In our last issue was recorded an interesting case, under the care of Dr. MacFarlane, in the Toronto General Hospital. It was necessary to open the gullet in the neck, in order to extract a foreign body which had become firmly impacted there; the patient, a young man 23 years of age, had swallowed a vulcanite tooth-plate, whilst drinking a glass of water. The operation was eminently successful, and the man was discharged from the hospital quite well.

In the *Lancet* of December 28th, 1889, Mr. Southam, surgeon to the Manchester Royal Infirmary, records the history of two patients successfully operated on by him last June.

These two cases, taken along with that of Dr. MacFarlane, form an interesting series. In all three cases the foreign body was a tooth-plate, and in all, the plate could be reached by the mouth, but was so firmly impacted in the œsophageal wall, that extraction by forceps, coin-catcher, etc., was impossible.

In one of Mr. Southam's cases the facts recorded are almost identical with those in Dr. MacFarlane's patient. The plate was located by measurement 8 inches from the incisor teeth. (Dr. MacFarlane's case was 8¼ inches.) The operation in each case was conducted on precisely the same lines throughout; there was no difficulty encountered, and the œsophageal wound in each instance was not sutured.

In Mr. Southam's second case there was considerable difficulty experienced during the operation, in consequence of the fact that the tooth-plate was impacted at a much lower level. On passing a bougie the foreign body, which was beyond the reach of the longest œsophageal forceps, could be felt at a distance of about twelve inches from the teeth. The foreign body therefore did not serve as a guide to the gullet during the operation, it could not be felt with the finger at the bottom of the wound. A full sized bougie was passed, which could be easily felt with the finger, and by cutting upon this as low down as possible, the gullet was opened. On exploring the œsophagus with a sound introduced through the wound, the foreign body was detected three inches below the upper border of the sternum, it could just be touched with the tip of the forefinger. It was so firmly impacted, that at first it was quite impossible to withdraw it. Attempts were made to break it up *in situ*, by means of bone-nippers, bone-forceps, and a lithotrite introduced through the wound, but they proved unsuccessful owing to the toughness of the vulcanite composition, and the limited space in which the manipulations had to be carried on. It was finally extracted, though not without considerable laceration of the mucous lining of the gullet, by forcibly pulling upon it with a pair of strong forceps. A drainage tube was inserted, and the external wound closed by suture as in the other cases. The left vocal cord was found completely paralysed on the following day; during the operation the left recurrent laryngeal nerve, which had been observed, was drawn aside by a retractor, this probably explained the subsequent paralysis of the cord; it was gradually recovered from.

The after treatment in both of the cases recorded by Mr. Southam was, that, for the first fortnight the patient was fed entirely by nutritive enemata, they were allowed to suck a little ice and an ounce of a solution of boracic acid, (10 grs. to the ounce) was administered by the mouth every four hours; this relieved thirst and kept the wound sweet and clean. After the first fortnight the patient was fed by means of a soft tube passed into the stomach every 4 hours; the tube was discontinued on the 25th day in one case, and on the 21st day in the other: in the latter the passage of the tube had on several occasions, been

followed by hæmorrhage, and it was therefore discontinued earlier, and for a few days the patient was again fed on nutritive enemata, and was allowed milk by the mouth.

Mr. Southam discusses several points in connection with œsophagotomy, suggested by a study of his own cases; these find illustration also in the case reported by Dr. MacFarlane. With regard to the question of operative interference, Mr. Southam states that when the foreign body is of considerable size, and irregular in shape, as in the case of a tooth-plate, and when it is so firmly fixed in the gullet that it resists all attempts at extraction through the mouth, œsophagotomy should at once be performed. Church has shown in a paper published in the St. Bartholomew's Hospital reports, that very serious results may follow if it is left. It frequently ulcerates into the surrounding tissues, where suppuration takes place, and fatal hæmorrhage may ensue from ulceration into one of the large blood-vessels.

The sooner the operation is done the better; according to Fische, the mortality is only 15 per cent. when œsophagotomy is performed within the first two days after the introduction of the foreign body; while if delayed until the third or fourth day, it reaches 30 per cent.

The œsophagus may be sutured, after the foreign body is extracted, provided that the margins of the wound are clean cut and free from bruising; there is a possibility in such cases of primary union taking place. Experience has shown however, that it is useless to attempt this if the œsophageal walls are in any way bruised or injured. In Dr. MacFarlane's case the foreign body had been in the gullet firmly impacted for fifty-three hours before operation, and the idea of attempting to suture the œsophageal wound, under such circumstances, was not entertained.

With regard to the after treatment, Dr. MacFarlane allowed the patient to sip a little water occasionally; this was expelled through the wound, and was given with the deliberate intention of flushing the wound and thereby cleansing it, at the same time quenching to some extent the patient's thirst. Mr. Southam administered an ounce of boracic acid solution, (10 grs. to the ounce), every four hours, with the same end in view and with good result. The administration of food by nutritive enemata was resorted to in all three cases. Occasionally enemata cannot be retained by the patient; in such cases Mr. Southam recommends the passage of a soft rubber tube by the mouth, in preference to the method suggested by Markœ, of introducing it directly through the wound in the neck.

According to Gross, the number of cases of œsophagotomy recorded up to 1886, is 82; of these 63 were successful, and 19 terminated fatally. Since that date Mr. Southam has found 14 additional cases recorded, of which 10 were successful and 4 followed by death. If the two cases recorded by Mr. Southam, and Dr. MacFarlane's case be added, we will have a total of 99 cases, of which 76 were successful, and 23 unsuccessful. This places the mortality of the operation of œsophagotomy at a little less than 24 per cent.

NOTES.

SYSTEMATIC OR DIDACTIC LECTURES.—During the Spring session of the General Medical Council, of Great Britain, Dr. Kidd, on the part of the Education Committee moved a resolution intended to reduce the enormous number of systematic lectures, which students are now required to attend. A candidate for the degree of the University of Edinburgh had to attend, it was stated, 1,300 lectures. The Education Committee in its report, expressed itself "strongly of opinion that the number of systematic lectures in certain subjects of medical education should be reduced." We wonder what the General Medical Council would think of the 1800 lectures demanded by the Quebec Board, or of the 1700 we insist upon in this province.

THE TREATMENT OF CHLOROSIS.—It is frequently found that chlorosis is very obstinate in its resistance to the effects of ordinary treatment. When it was discovered that it was caused by, or at least accompanied with, a deficiency of iron in the blood, its cure appeared to be quite a simple matter. The administration of iron, however, in many cases, has no good effect—sometimes it is positively injurious. The *Medical News* states that M. Autiq was the originator

of a plan of treatment by the administration of enemata of defibrinated blood, but casts doubts on its efficacy. The *News* goes on to state that each case should be treated on its own merits—or demerits, and that hygienic reasons, such as exercise, sea-bathing, massage, etc, should be prescribed. Sir Andrew Clark has probably taught us one of the best lessons on this subject, in pointing out that it was frequently caused indirectly by constipation and reabsorption of noxious matters from the intestinal tract. In such cases an effective course of cathartic treatment should be instituted before administering iron tonics.

Meeting of Medical Societies.

THE PATHOLOGICAL SOCIETY OF TORONTO.

Saturday, Dec. 28th, 1889.

The President, Dr. Reeve, in the chair.

Dr. John Caven presented the following specimens:

1. Small globular growth in substance of supra-renal capsule. *Size*, about ¼ inch diameter. *Color*, yellowish white. *Consistence* firm. The growth is embedded completely in capsule substance, and is possessed of a slight fibrous capsule of its own. Under microscope growth it is seen to be mainly made up of polyhedral epithelial cells, much resembling those in the fasciculi of the normal supra-renal. These peculiar cells are shut up in alveoli, formed of a very delicate fibro-cellular tissue. In some cases the alveoli are jammed full of the cell elements, in others they are arranged with some show of regularity around the alveolar wall. In many of the alveoli leucocytes are to be seen, scattered amongst the larger peculiar cells. The "peculiar" cells have a distinct nucleus, single, and much larger than that of a leucocyte. These cells measure on an average about $\frac{1}{1200}$ of an inch.

2. A diverticulum on the small intestine about 3 feet from the ileo-cæcal valve—about 2½ inches long—opens into intestine—contains all the coats of the intestine in its structure—evidently a specimen of Meckel's diverticulum. Has no connection with the umbilicus.

3. A curious cyst found in an anencephalous monster. This cyst, which occupies the position of the middle cervical ganglion, was about the size of an ordinary hickory nut. Contained a mucous fluid which the microscope showed to contain large quantities of cylindrical and flat cells, both separate and in masses. The cyst wall is made up of fibrous and muscular tissue (smooth) lined with flattened cells, apparently epithelial, and showing apparent gland structure with columnar cells.

4. A portion of the large intestine, studded with small grape-sized diverticula. These diverticula consisting of mucous coat protruding through the muscular walls of the intestine.

GROWTH IN THE ANENCEPHALOUS MONSTER.

Dr. Cameron thought that the supra-renal growth could not be cancerous, as it had a capsule. The cyst might be a relic of the branchial cleft, which contains muscular tissue.

Dr. A. B. MacCallum was not sure that the musculature could arrange itself in such a regular way as in this preparation, if the cyst were derived from the branchial cleft. Its position would favor the idea of such an origin. In these anencephalous monsters the organs frequently present these low types.

From the microscopic specimen it is hard to make out whether the muscle is striated or not. Not much importance was to be attached to the presence of the muscle. We can easily suppose that the muscular tissue would continue to grow, although slightly changed.

MECKEL'S DIVERTICULUM.

Dr. Primrose asked why these were more common in the child than in the adult. Was it because in the adult they close, shrivel, and become a mere fibrous cord?

Dr. Cameron had seen several specimens, but there had always been more than one diverticulum. He had always considered them to be of the same nature as the vermiform appendix.

Dr. McPhedran asked if these diverticula were subject to the same pathological changes as the vermiform appendix.

Dr. Caven replied that he thought that there might be the same pathological changes. We know that they may become cystic and even strangulated.

GRAPE-LIKE DIVERTICULA.

Dr. Cameron had seen a number of such grape-like diverticula but they were usually of

larger size. His experience had been that patients who have these usually die of dilated stomach. This might be attributed to the fluid diet which they have in their toothless old age. One would think that these slender walls of these diverticula might easily give way and cause the death of the patient. Probably this was prevented by closure of the mouths of the diverticula by the contraction of the intestinal muscles.

Dr. Nevitt, who had with Dr. Cameron made several post-mortem examinations on cases of this kind, said that in all the cases the mouths of the diverticula were patent and solid fæces were found in them, while the rest of the bowel was empty. The fæces might of course get in during intervals of quietude.

Dr. McPhedran thought that the real source of the patient's safety was his debility.

TALIPES CAVUS.

Dr. Primrose: The cast which I now show you, Mr. President, was taken from an exaggerated case of so-called "hollow-foot," occurring in a boy about fourteen years of age, a patient under Dr. Cameron, in Toronto General Hospital.

FROM A PHOTOGRAPH OF CAST.

The deformity presented in the specimen is typical in character although excessive in degree, and one can with advantage examine such a foot for the purpose of determining the different factors which have been at work in producing the condition. The cast of the inner half of the foot is perfect; note the marked exaggeration of the antero-posterior arch of the foot, the ball of the great toe is unusually prominent, the proximal phalanx is hyper-extended on the head of the metatarsal bone and the distal is flexed upon the proximal phalanx. The condition of the four outer toes is similar to that of the great toe, the proximal phalanges are abnormally extended, and the terminal phalanges flexed, producing the deformity usually known as "hammer-toe."

It has been suggested that the cause of the deformity in hollow-foot is primarily paralysis o the interossei muscles. The anatomical plan common to all the interossei is that each muscle has its origin laterally from one or more metatarsal bones near their proximal extremities, and runs forward to be attached laterally to the bone of the proximal phalanx of the toe; in addition to this there is an aponeurotic expansion continued from each muscle which blends with the tendon of the extensor muscle on the dorsal aspect of the proximal phalanx. The action of the interossei is two-fold, they act as adductors and abductors to and from the second toe; they also by their contraction bring about flexion of the proximal phalanges and extension of the terminal phalanges; this latter is the action with which we are concerned in the deformity under consideration. When the interossei are paralysed the physiological antagonists of these muscles will by their unopposed action bring about a condition of things the reverse of that which occurs when the interossei are in action; the reverse condition would be, extension of the proximal phalanges and flexion of the terminal phalanges; in fact the exact condition of things which we find in this cast. There are no interossei inserted into the great toe but the oblique adductor and the short flexor of the great toe have insertions similar to that of the interossei, namely, into the bone of the proximal phalanx and also into the extensor aponeurosis on the dor al aspect of the first phalanx, this I have verified by dissection. It is therefore these two muscles which take on the action of the interossei in the case of the first digit; paralysis of these muscles would bring about the deformity which we find in the great toe of the cast. After the deformity has been

thus produced it is rendered permanent by a contraction of the plantar fascia.

The condition existing in this case may therefore be satisfactorily explained by having been brought about primarily by a paralysis of the interossei muscles along with that of the oblique adductor and short flexor of the great toe, a subsequent contraction of the plantar fascia, rendering it impossible to correct the deformity by simple manipulation.

The material of which the cast is made is printers' "roll," very similar in composition to that suggested by Dr. Cathcart of Edinburgh. This has been called cathcartine and is made in the following manner: "Soak glue, or what is preferable, ordinary French gelatine, in water until it has been thoroughly softened. Allow it to lie exposed so that the water may evaporate to such on extent that the gelatine becomes pliable but not soft. Melt this in a water bath, and add to it as much glycerine by measure as there was dry gelatine by weight It is also advantageous to add to the glycerine about one to forty carbolic acid. Mix them thoroughly, and stir in the finest ground oxide of zinc suspended in a little glycerine until the whole mass assumes an opaque white appearance."

Dr. Cameron: "I cannot give all the previous history of the patient, but there is no record of diphtheria or of scarlatina. The treatment has been Electricity and Barwell's Elastic Muscle. To me, Dr. Primroses explanation seems very reasonable. The term Pes Cavus is misleading. I do not think that there is any such condition. The case is really one of talipes equino plantaris varus. Talipes arcuatus is a better name. Simple division of the fascia and superficial muscles will cure. It is noteworthy that the other foot is now getting into the same condition."

Dr. Peters pointed out that the tonic contraction of the long flexors and extensors of the toes tended not only to maintain, but to aggravate the condition brought about by the paralysis or atrophy of the interossei. By such chronic contraction the proximal ends of the first phalanges become subluxated upon the heads of the metatarsal bones. These are in this way thrust down into the sole of the foot in such a manner as to increase its arch. The plantar fascia which is thus relaxed in process of time becomes shortened, and changes may also subsequently take place in the ligaments and articulations. In some cases of club foot, all the soft parts except the ligaments may be cut away without correcting the deformity of the foot. Hence in the treatment of this deformity it may be necessary to divide not only the plantar fascia and the contracted muscles, but also the long calaneo-cuboid and some other ligaments.

Dr. Primrose in answer to Dr. Peters said that the action of the flexor digitorum muscle has not so much to do with producing the deformity as his remarks might lead one to infer. It is the common extensor muscle and the extensor longus pollicis which have the chief action; if the interossei, the adductor hallucis, and the flexor brevis hallucis be paralysed then the extensor muscles are no longer retained against the dorsal aspect of the proximal phalanges and they would act from the proximal extremity of the distal phalanx as their fixed points below. The result of their action would be to draw the terminal phalanx upwards and backwards, producing thereby extension at the metacarpo-phalangeal joint and extension at the inter-phalangeal joints. The flexor tendon, on the other hand, is firmly bound down on the under aspect of the proximal phalanx, in a fibrous sheath and contraction of this muscle would tend rather to prevent hyper-extension at the metatarso-phalangeal joint. There is not necessarily any alteration in the shape of the bones of the foot although a partial dislocation may occur at the metacarpo-phalangeal joint.

Book Notices.

A Guide to the Diseases of Children. By Jas. Frederic Goodhart, M.D., F.R.C.P., Physician to Guy's Hospital, and Lecturer in Pathology in its Medical School, etc. Re-arranged, revised and edited by Louis Starr, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Second American from the third English edition; Philadelphia: P. Blakiston, Son & Co.

This is an admirable and delightful book. It is now pretty generally recognized that Dr Goodhart's descriptions of diseases of children are remarkably clear and forcible, and, as has been remarked by others, closely resemble actual

bedside teaching. His advice as to treatment is also eminently clear and practical. Among all the diseases of infancy and childhood those of the organs of digestion are probably the most important. Our author's views and expressions on such diseases are, we believe, almost beyond criticism, and his directions on feeding are about as nearly perfect as possible. In connection with this subject we can recognize the hand of the editor in much that is written, and his reputation in this branch of pediatrics stands deservedly high on this continent. The work will undoubtedly be as popular with the profession as it will be useful to its members. Probably we would be more correct in saying that it has already attained this position. We may say that the excellence referred to is not confined to diseases of the digestive organs, but permeates the whole book.

Books and Pamphlets Received.

Spontaneous Rheumatic Nodules. By William A. Edwards, M.D., San Diego, California, formerly Instructor in Clinical Medicine, University of Pennsylvania. Reprinted from the *University Medical Magazine.*

Concealed Pregnancy: Its Relations to Abdominal Surgery. By Albert Vander Veer, M.D., Professor of Didactic, Abdominal and Clinical Surgery in the Albany Medical College, etc. Reprinted from the *American Journal of Obstetrics.*

A Digest of Twenty Years Experience in the Treatment of Uterine Cancer, including 367 Operations by Galvano-Cautery. By John Bryne, M.D., M.R.C.S.E., Surgeon in Chief to St. Mary's Maternity, Chief of Gynæcological Department, and President of the Faculty of St. Mary's Hospital, Brooklyn, etc. Reprinted from the Transactions of the American Gynæcological Society.

Personal.

DR. P. J. RICE (Tor. Sch. of Med., 85) is practising in Nanaimo, B.C.

DR. J. C. PATTON, after spending a couple of years in Great Britain and Germany, has returned to Canada and commenced practice in Toronto.

DR. C. R. CHARTERIS has removed from Chatham, and is now practising in Florence.

DR. W. C. BARBER (Tor. 88) has commenced his duties as an assistant in the London Asylum for Insane.

DR. FRANK BEEMER (Tor. Sch. of Med., 84) has entered the Asylum for Insane, Hamilton, as an Assistant Physician.

DR. F. W. CANE (Tor., 85) has resigned his position as an assistant in the Toronto Asylum for Insane, and will enter into private practice.

DR. A. MCDIARMID has been appointed Professor of Obstetrics in the Manitoba Medical College in the place of the late Dr. R. B. Fergusson.

DR. T. W. REYNOLDS (McGill, 81), who was for some years in the Hamilton Asylum is now in charge of the branch asylum for the insane at Mimico.

Obituary.

DR. H. J. MULLEN (Trin., 89) died in Toronto last month, after a short illness from tubercular meningitis.

DR. R. B. FERGUSSON.—Dr. R. B. Fergusson died in Winnipeg, January 11th, after a brief illness, from pneumonia. He was Professor in Obstetrics in Manitoba Medical College, and was one of the incorporators of the College. He graduated in the University of Queen's College in 1863.

SIR WILLIAM GULL, BART, M.D.—Sir Wm. Gull was one of the eminent physicians of Great Britain. He commenced his medical career as a student in Guy's Hospital. His prospects were not then very bright and his friends were few. By his own unaided exertions he soon came to the fore. In 1871 he was one of the physicians in attendance on the Prince of Wales and received the principal credit for his recovery. In the following year he was created a baronet. He was for many years Physician and Lecturer on Medicine in Guy's Hospital. He was seized

with apoplexy January 28th, and died on the following day, in the 74th year of his age.

MRS MALLOCH.—The deepest sympathies of the profession of Ontario will go out to Dr. A. E. Malloch, of Hamilton, and his six children, on account of their sad bereavement in the loss of a loving and beloved wife and mother. There has been considerable sickness in the family during the last two or three years, and it is probable that Mrs. Malloch's devotion to her family was partially the cause of her death, which occurred at her home in Hamilton, Jan. 28th.

MRS. GEIKIE.—We have to announce, with deep regret, the death of Mrs. Geikie, the wife of Dr. Walter B. Geikie, Dean of the Trinity Medical College, which took place on Thursday, January 30th. The students of both Medical Colleges in Toronto held mass meetings, and passed very kindly and considerate resolutions expressing the deepest sympathy with Dr. Geikie and his afflicted family. The funeral took place on Saturday, February 1st, when there was a large attendance of the Medical College Faculties and students.

Miscellaneous.

Dr. Ricord left, by his will, ten thousand francs to the Paris Academy of Medicine for a biennial prize, five thousand francs to the Society of Surgeons for a biennial prize, ten thousand francs to the General French Medical Association, and his extensive library to the *Hôspital du Midi.*

The 8th yearly issue of the "*International Medical Annual*" (for 1890) is announced for early delivery. The Prospectus gives promise of excellencies surpassing all former editions. Its thirty-seven editors in the several departments are to give a summary of New Remedies alphabetically arranged, also a resume of New Treatment in Dictionary form, with references to the Medical literature of the world pertaining to the year's progress of Medicine.

In one volume of about 600 octavo pages; price, $2.75, post free.

E. B. TREAT, Publisher, 5 Cooper Union, New York.

WARNER'S ANTISEPTIC PASTILLES.—Following a suggestion recently made by Dr. C. Seiler in the *Medical Record*, Messrs. William R. Warner & Co., of Philadelphia, are now placing on the market antiseptic pastilles for the treatment of certain nasal affections. These pastilles are not only powerfully antiseptic and comparatively innocuous, but also distinctly deodorant, as sodium bicarbonate, sodium biborate, sodium benzoate, sodium salicylate, menthol, and oil of wintergreen enter into their composition. One of the pastilles makes 2 oz. of a lotion or spray for the nostrils, and it is, according to Dr. Seiler, "sufficiently alkaline to dissolve the thickened secretion adhering to the nasal mucous membrane, and as it is of proper density, it is bland and unirritating, leaving a pleasant feeling in the nose."—*The Chemist and Druggist.*

J. E. Prichard, M.D., Baltimore, Md., says: The Aletris Cordial I think a most excellent remedy and have used it in ten cases of suppressed menstruation, in all of which with the best results. Among my patients was four unmarried women; one aged 20 years, had her menstruation arrested six months when she came under my care. She was swollen and suffered considerable pain at each monthly period, but she had no show of any catamenial discharge. I placed her on Aletris Cordial, teaspoonful doses, three times a day. She continued it for seven days, when she menstruated. I ordered her to commence again five days before her expected time to menstruate, which she has done. She is now regular and suffers no pain. Have also used it in cases of vaginal leucorrhea with a happy result. In cases of hysteria which we sometimes find complicated with leucorrhea I have combined it with Celerina.

℞.—Aletris Cordial, 4 ounces.
Celerina, 4 ounces.

M. Sig.—Teaspoonful every three hours for one day, then the next would give it four to five hours.

I am happy to say that it has not failed to give relief in all cases in which I have prescribed it.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

☞ Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, FEBRUARY 17, 1890.

Original Communications.

EPIDEMIC INFLUENZA.

AN ABSTRACT OF CLINICAL REMARKS DELIVERED AT THE TORONTO GENERAL HOSPITAL.

BY A. M'PHEDRAN, M.B.,

Lecturer on Clinical Medicine in the University of Toronto.

In the present epidemic of influenza, which is gradually lessening, there has been great variety in the symptoms presented. The symptoms may be conveniently grouped under the following heads, viz.: 1, febrile, 2, nervous, 3, catarrhal, 4, gastro-enteric. Febrile and nervous symptoms were present to a greater or less degree in all cases probably; a few may have been apyretic, but I have met with none in which there were not some nervous disturbances. But in many cases there were no catarrhal symptoms, and only in a comparatively small proportion of cases were these symptoms very severe. Gastro-enteric disturbance occurred in several.

This case of A. T., aged 30, presents a good illustration of the group in which there were only febrile and nervous phenomena present. He awoke in the morning feeling sore all over, as if from over-work. The soreness was most marked in the lower dorsal region, and by evening was so severe that breathing was extremely painful, there being a feeling of much pain and tightness around the chest. During the night the temperature rose to 102°, with frequent flashes of heat, followed by chilliness, dizziness and sleeplessness. There was no frontal pain, sneezing, coughing or nasal symptoms. Free perspiration was induced, but without any rapid relief to any of the symptoms. The temperature fell to normal next day, and the pains rapidly abated, so that he was able to return to business in the afternoon, though he was sore and stiff for a day or two. The appetite was good throughout, and no prostration followed. In many cases quite as mild as this the appetite failed, and there was in some very great prostration, so great in a few that syncope occurred even while quietly in bed. In some the pains were extremely severe, and assumed a periodic character, coming on at a certain hour every day, and lasting an hour or two, or perhaps all night. In some of them the pain was frontal, even in the absence of any other evidence of implication of the frontal sinuses; in others, the pain was in the sides, the back, the thighs, or the abdomen. In most of these the pains were difficult to relieve, and only disappeared slowly under rest, good nourishment, and tonic treatment.

The fever rarely lasted longer than from one to three days, a continuance of it being probably due to some complication as bronchitis or pneumonia. The temperature rarely rose higher than 102° or 103°; occasionally to even 105.

Sleeplessness has been a troublesome feature in many cases, some not obtaining any sleep for 4 or 5 days.

In this patient the attack is typical of many of the catarrhal cases. He is a healthy young man. He went down street in the morning, and while standing at a street corner he suddenly became weak, dizzy, and sick, and could scarcely walk home. He shortly suffered pains in all parts, with most intense pain in the head. In the evening, catarrhal symptoms set in—eyes watery, nose stuffed up, cough with free expectoration of dark bloody fluid. Temperature rose to about 103°, head grew worse as the catarrhal symptoms developed ; anorexia, constipation, scanty high-colored urine. The fever and severe headache disappeared in three days, the cough continued, but the sputa gradually lost its dark color, becoming muco-purulent. There was considerable prostration. He was confined to bed two weeks, and his recovery of strength was gradual. The bloody sputa was doubtless due to great congestion of parts of the lungs. In several similar cases I have found dulness with weak respiratory murmurs at the base, lasting for 2 or 3 days. Had this been due to pneumonia, the fever and dulness would not have disappeared so soon.

In many cases, however, well marked attacks of pneumonia followed as a sequel ; and that, too, even in those who were without the catarrhal phase of influenza. Such was the case in an old lady in whom the symptoms were only febrile and nervous which disappeared on the 3rd day, leaving her feeling very well ; she was seized that night with a chill, next day she was delirious, and the lower lobe of the left lung soon hepatized. She died on the 6th day of pneumonia.

Similar but milder cases have been numerous, the most frequent seats of consolidation being the base of the lungs and thin portions lying beneath the 2nd and 3rd costal cartilages and overlapping the large vessels. The latter is a frequent point of attack, especially in catarrhal pneumonia, which has been an occasional complication. Catarrhal pneumonia is to be suspected, even if we cannot discover signs of consolidation, if slight fever persists, with cough, perspiration and considerable prostration: such cases require the utmost care in order to secure complete recovery, on account of their liability to develop phthisis.

In a few cases the pneumonia has been of a low type, developing probably in the heavily congested lung, and ending in purulent infiltration of the diseased part. Such a case we have just had in Ward 14, in a man aged 50, who was brought in, in a typhoid state with an almost imperceptible pulse. There was little cough, slightly accelerated breathing, and he presented an appearance of a late stage of enteric fever. A careful examination could not be made, but you know we ascertained that there was dulness in the left axillary space with weak tubular breathing, and we judge that there was probably purulent infiltration of the base of the left lung. Such was the condition found at the post mortem in the bases of both lungs, the left being greatly disorganized.

I have met with two cases in which spasmodic asthma was a sequel, and in one with spasmodic croup with some catarrh of the larynx. In many there has been a persistent hard, distressing cough, often paroxysmal, that seemed to be due to a slight catarrh of the larynx, re-acting on an irritable nerve centre.

Cases with marked gastro-enteric symptoms have occurred from the first, but have been much more common in the late than in the early part of the epidemic. Most of you will remember a young man admitted into Ward 5, early in January, with several general pains and with distressing vomiting of bright green fluid. The vomiting persisted for four days, and after that, he rapidly regained his strength. This is but an illustration of many cases that were met with, most of them, however, were of shorter duration—not more than a day or two. Lately the enteric symptoms have been most common. The patient is suddenly seized with a watery diarrhœa, with considerable flatus. The discharges are very offensive, and usually dark in color. There may be three or four or even a dozen evacuations in the course of a day. In some there is no pain, while in others, there is severe pain all over the abdomen, with much tenderness ; it seems situated in the abdominal wall, and quite independent of the condition of the intestinal tract. Equally severe pain and tenderness are present in a good many who have no diarrhœa, and several of these suffer from a hyperæsthetic state of the stomach In these there

is pain after taking food, similar to that felt in ulceration of the stomach. Occasionally there is vomiting. These abdominal pains are very difficult to relieve; they seem to be of the same nature as the pains already referred to, as occurring in other parts of the body.

In several cases of this epidemic influenza, there has been slight jaundice, as indicated by yellow tinge of the conjunctiva and general surface. In most, if not all of these, there has been considerable fever and prostration. The following case, which I saw with Dr. Dobie, illustrates the most severe of these cases with jaundice. The patient was a young man. He had had a sharp attack of influenza; the temperature rising to over 104° with considerable delirium. After a day or two he improved, and was able to sit up. The next day he was feverish again, noisy delirium soon set in again, and jaundice began to develop. The temperature was variable but high, jaundice deepened, the conjunctiva being also markedly congested. He rapidly grew worse, became comatose, urine dribbled away unconsciously, staining the bed a deep yellowish brown. A marked purpuric rash came out, but there were no other hemorrhages. The bowels were moved by enemata, the motions being at first constipated, later bilious. Some mucus was vomited. Liver dulness was somewhat lessened. The pupils reacted to light. He died comatose within a week of the relapse. I saw another case with Dr. Frank Cowan, in the person of a young medical practitioner, in whom the jaundice was less deep, but the petechial rash was quite copious. He also died comatose within a few days. And I have just seen another case with Dr. R. B. Nevitt, bearing a striking resemblance to these two; what the result will be remains to be seen, but there is little probability of recovery, as the patient is already in a typhoid state, with very weak pulse. The urine is dark and contains a trace of albumen; the stools are pale, the tongue brown and dry, and there appears to be tenderness in all parts. Liver dulness is somewhat diminished, and splenic dulness reaches the margins of the ribs.

Doubtless the condition in all these cases is one of marked toxæmia. The jaundice may be due to destruction of red blood corpuscles, but the reduction of the area of liver dulness indicates disease of the liver, and jaundice, as due in part at least to absorption of bile. In that case they resemble acute yellow atrophy of the liver, which occurs sometimes in fevers. The first case looks very much like one of yellow atrophy, except that the temperature rose to 107° before death, instead of being subnormal.

Generally speaking, in this epidemic, the prognosisis favorable. The general mortality has been high, but probably few deaths have been due to the influenza directly. This is due to the fact that the intensity of the fever was usually mild, and its duration short, and the vital organs were seldom more than slightly affected. A few however died, I believe, of heart failure, but perhaps the heart was previously affected. Pneumonia seems to have been unusually prevalent, but there can scarcely be any direct connection between it and influenza—the same germ would probably not cause both diseases. The heavy congestion of the lungs occurring in many cases doubtless rendered them more vulnerable to attack by the microbes of pneumonia.

Relapses, or second attacks, were fairly common. One gentleman had a marked attack of influenza, and then pneumonia as a sequel. He passed the crisis of that disease, when he was again attacked by influenza, in which he had a temperature of 103°. It had no effect, however, on the process of resolution in the lung—he seemed to recover quite as quickly from the pneumonia as if he had not had the second attack. None of the cases of second attacks which I have seen were due to want of care.

As to treatment, the scientific method would be to give some substance that would kill or *inhibit*, the specific microbe—if there be such—that cause the disease, as quinine destroys the germs of intermittent fever. But we know neither the germ nor the agent that would destroy it; we have to content ourselves therefore with symptomatic treatment.

For the relief of the headache and the pains in the back and limbs, the newer analgesics are exceedingly useful. Phenacetine, which I used most frequently, given in 5 to 20 gr. doses, usually gave great satisfaction—in some cases it

failed, and on two or three occasions it was followed by considerable depression. Antipyrin was largely used, but I have seen severe cardiac weakness produced by it, and therefore seldom prescribe it. Da Costa advises small doses of quinine with antipyrin, to prevent the depression. Antifebrin and exalgine have also been used; gelsemium has been found to give relief, where all others had failed. All these analgesics should be used with caution, as dangerous depression is liable to follow all of them. For the nasal catarrh I have found a spray of a 2 per cent. solution of cocaine give most relief usually. In some, the inhalation vapor from hot water, containing tincture Benzoin C., gave most satisfaction. It not only relieved the nasal symptoms, but also the laryngeal and bronchial at the same time. For the paroxysmal cough, sedatives were chiefly called for—given frequently in small doses to keep up their effect—such as bromides, morphia, Dovers powder, hydrocyanic acid, chloroform, etc.

The great tendency to prostration is to be borne in mind, and every effort made to maintain the nutrition. Quinine 2 grs., three or four times a day, proved useful. The bowels should be kept open but care taken not to purge, lest a diarrhœa be established. For the diarrhœal cases I have always found bismuth, with a little opium, sufficient to control the bowels, the patient being kept in bed and warmth maintained. If prostration becomes marked, stimulants should be given in moderate quantities. If the circulation be weak, small doses of nux vomica and belladonna are of great service; later, iron should be given.

Selections.

HYDERABAD CHLOROFORM COMMISSION.

In January, 1888, a commission appointed by the Nizam of Hyderabad to inquire into the dangers of chloroform anæsthesia reported, after many experiments upon dogs, "that chloroform may be given to dogs by inhalation with perfect safety, and without any fear of accidental death, if only the respiration, and nothing but the respiration, is carefully attended to throughout."

This report, agreeing with the teaching of the celebrated Scotch surgeon, Syme, was severely commented upon by the London *Lancet*. The Nizam thereupon offered that journal £1000 that it might send a representative to Hyderabad to repeat the experiments of the Commission, and to make any others thought necessary. The task was entrusted to Dr. Lauder Brunton, England's best known pharmacologist. On his arrival in India, a new Commission was formed, consisting of Surgeon-Major E. Laurie, M.B., Edinburgh; Dr. T. Lauder Brunton, F.R.S.; Surgeon-Major Gerald Bomford, M.D., London; Dr. Rustomje, H.H., the Nizam's Medical Adviser. Associated with them were the members of the first commission.

The commission made 430 experiments upon dogs, monkeys, horses, goats, cats and rabbits; 300 animals were killed outright, and 125 subjected to artificial respiration at varying intervals after natural respiration had been arrested by chloroform.

The animals killed had chloroform given them in every possible way, and under every conceivable condition; some fasting, others at varying intervals after heavy meals; others after administration of Liebig's extract of meat, coffee, rectified spirits or ammonia. Most of them were healthy, but some had heart disease; in many the heart and other organs had been rendered fatty by the administration of phosphorus. Chloroform was given with and without inhalers; in the vertical and recumbent positions; in large and in small doses; in fact in every way that could be thought of.

The effects of chloroform did not appear to be interfered with or much influenced by any of these various conditions.

In every case where the chloroform was pushed the respiration stopped before the heart.

Chloroform, given continuously, and freely diluted with air, causes a gradual fall in the mean blood pressure, provided the animal's respiration is not impeded, and it continues to breathe quietly without struggling or involuntary holding of the breath. As this fall continues, the animal first becomes insensible, then respiration gradually ceases, and lastly the heart stops. The chloroform, however concentrated, never causes sudden death from stop-

page of the heart. If the inhalation be interrupted, the fall still goes on, at a rate proportionate to the rapidity of the fall while the chloroform was being inhaled. This after fall is due to absorption of some of the residue of chloroform in the air passages. Thus, often, if chloroform is given rather freely, respiration although going on when the chloroform is discontinued, afterwards stops. If the chloroform is stopped altogether, the blood pressure falls for a little, but soon rises again and shortly becomes normal. If the anæsthetic be pushed further, there comes a time when the blood pressure and respiration will no longer be restored spontaneously, although the heart continues to beat after the inhalation is stopped.

Occasionally, if the fall has been very gradual, the respiration stops completely, but as the blood pressure rises again, the respiration recommences spontaneously. The same thing may happen when the inhalation has been discontinued.

If struggling is accompanied by acceleration of the respiration and pulse, especially if the respiration is deep and gasping, there is a more rapid inhalation of chloroform and consequently a more rapid fall of blood pressure, and a greater after fall. A similiar rapid decline of blood pressure is caused by involuntary holding of the breath, and by slight continuous asphyxia, for both are followed by a. deep gasping inspiration.

Complete asphyxia has a similar but more marked effect, and the trace corresponds precisely to that due to irritation of the peripheral end of the cut vagus. The pressure falls very rapidly, sometimes almost to zero, and the heart's action becomes excessively slow or even stops for a few seconds. This effect of asphyxia is the result of stimulation of the vagi.

In itself, is the slow action, or temporary stoppage of the heart, with great fall of pressure produced by vagus irritation, an element of danger in chloroform administration, and if not, wherein is the danger?

Deliberate irritation of the vagi during anæsthesia was shown experimentally to diminish rather than increase the danger. The effect on the heart is never continuous, and as the vagus becomes exhausted, or the irritation is taken off, the blood pressure rises again, as it does when the same result is produced by asphyxia.

The slowing of the heart and circulation produced by irritation of the vagus from any cause, *e.g.*, holding the breath in chloroform administration, retards the absorption and conveyance of chloroform to the nerve centres.

The effect of vagus irritation upon the heart is never continuous; and in chloroform administration, as the pressure rises again after the slowing of the heart and temporary fall of pressure produced by any form of asphyxia violent respiratory efforts with bounding heart's action lead to a rapid and dangerous inhalation of chloroform, and consequent rapid and dangerous decline in blood pressure. The temporary exhaustion of the vagi after stimulation is to be feared, not the actual stimulation, so long as it is continued.

Accordingly in chloroform administration neither holding the breath, even if involuntary, nor vagus inhibition can be kept up beyond a certain time; and if the chloroform is not removed from the face, one or both of two things may happen: (*a*) when the animal breathes again, it takes deep and gasping inspirations, the lungs become filled with chloroform, and an overdose is taken in with extreme rapidity; or (*b*) when the restraining influence of the vagus is taken off the heart, through the irritation ceasing or the nerve becoming exhausted, the heart bounds on again, and the circulation is accelerated in proportion. The blood then becoming quickly saturated with chloroform, an overdose is at once conveyed to the nerve centres. The theory hitherto accepted that the danger in chloroform administration is the slowing or stoppage of the heart by vagus inhibition, is now shown to be *absolutely incorrect.* The controlling influence of the vagus on the heart is a safeguard; it is the exhaustion of the nerve which is dangerous.

When the pulse is rapid and bounding, with high blood pressure, there must be more rapid absorption of blood from the lungs, and a more rapid propulsion of the chloroformed blood to the medulla oblongata, and consequently a more rapid paralysis of the respiratory and vaso-motor centres and precipitous fall in the blood pressure. Not only is the poisoned blood carried more swiftly to the vital centres

in these cases, but as the heart is already doing its utmost before the chloroform is given, it is unable by increased work to stave off the fall in pressure that occurs when the vaso-motor centre is paralysed.

The effect of artificial respiration after the natural respiration has ceased is to cause an alternate rise and fall of small amount in the blood pressure. After artificial respiration has been continued for a certain time, the blood pressure again rises, and a little later natural respiration returns.

Complete stoppage of the respiration always means that an overdose has been given, an overdose perhaps so great as to cause a very prolonged after-fall of blood pressure, and thus render restoration impossible. No matter how soon it is commenced after the respiration stops, it is never in any case certain that artificial respiration will restore the natural respiration and blood pressure; even after the respiration has been restored, the pressure may continue to fall and respiration again ceases and artificial respiration then fails. The time which may be allowed with impunity to pass before commencing artificial respiration varies considerably, as does the time taken to restore natural respiration.

To test the alleged danger from shock during chloroform administration, a very large number of those operations reputed peculiarly dangerous in this connection were performed, such as extraction of teeth, evulsion of nails. In many cases the operation was done when the animal was merely stupefied by the chloroform and not fully insensible. In such cases a slight variation in the blood pressure would sometimes occur, such as one would expect from the irritation of a sensory nerve, or from struggling, but in no case in any stage of anæsthesia was there anything even suggestive of syncope or failure of the heart's action.

The commission concluded that chloroform has no power of increasing the tendency to either shock or syncope during operations. If shock or syncope does occur from any cause, it prevents, rather than aggravates, the dangers of chloroform inhalation.

As to fatty heart, the truth appears to be that chloroform *per se* in no way endangers such a heart, but, on the contrary, by lowering the blood pressure, lessens the work that the heart has to perform, which is a positive advantage. A patient with an extremely fatty heart may die from the mere exertion of getting upon the operating table, just as he may die in mounting his own front steps, or from fright at the mere idea of taking chloroform or of undergoing an operation, or during his involuntary struggles. Such patients must inevitably die occasionally during chloroform administration, and would do so even if attar of roses were inhaled.

Severe hemorrhage in no way affects the action of chloroform, for the low blood pressure produced by the bleeding tends to prevent a too rapid intake of chloroform. Of course a patient nearly bled to death needs less chloroform to put him into a state of anæsthesia.

PRACTICAL CONCLUSIONS.

The following are the practical conclusions which the Commission think may fairly be deduced from the experiments recorded in this report :—

I. The recumbent position on the back and absolute freedom of respiration are essential.

II. If during an operation the recumbent position on the back cannot, from any cause, be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration, the patient should be at once restored to the recumbent position on the back.

III. To ensure absolute freedom of respiration, tight clothing of every kind, either on the neck, chest, or abdomen, is to be strictly avoided ; and no assistants or bystanders should be allowed to exert pressure on any part of the patient's thorax or abdomen, even though the patient be struggling violently. If struggling does occur, it is always possible to hold the patient down by pressure on the shoulders, pelvis, or legs, without doing anything which can by any possibility interfere with the free movements of respiration.

IV. An apparatus is not essential, and ought not to be used, as, being made to fit the face, it must tend to produce a certain amount of asphyxia. Moreover, it is apt to take up part of the attention which is required elsewhere.

In short, no matter how it is made, it introduces an element of danger into the administration. A convenient form of inhaler is an open cone or cap, with a little absorbent cotton inside at the apex.

V. At the commencement of inhalation care should be taken, by not holding the cap too close over the mouth and nose, to avoid exciting struggling, or holding of the breath. If struggling or holding of the breath do occur, great care is necessary to avoid an overdose during the deep inspirations which follow. When quiet breathing is ensured as the patient begins to go over, there is no reason why the inhaler should not be applied close to the face; and all that is then necessary is to watch the cornea and to see that the respiration is not interfered with.

VI. In children, crying ensures free admission of chloroform into the lungs; but as struggling and holding the breath can hardly be avoided, and one or two whiffs of chloroform may be sufficient to produce complete insensibility, they should always be allowed to inhale a little fresh air during the first deep inspirations which follow. In any struggling persons, but especially in children, it is essential to remove the inhaler after the first or second deep inspiration, as enough chloroform may have been inhaled to produce deep anæsthesia, and this may only appear, or may deepen, after the chloroform is stopped. Struggling is best avoided in adults by making them blow out hard after each inspiration during the inhalation.

VII. The patient is, as a rule, anæsthetised and ready for the operation to be commenced when unconscious winking is no longer produced by touching the surface of the eye with the tip of the finger. The anæsthetic should never under any circumstances be pushed till the respiration stops; but when once the cornea is insensitive, the patient should be kept gently under by occasional inhalations, and not be allowed to come out and renew the stage of struggling and resistance.

VIII. As a rule, no operation should be commenced until the patient is fully under the influence of the anæsthetic, so as to avoid all chances of death from surgical shock or fright.

IX. The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anæsthesia, is to see that the respiration is not interfered with.

X. If possible, the patient's chest and abdomen should be exposed during chloroform inhalation, so that the respiratory movements can be seen by the administrator. If anything interferes with the respiration in any way, however slightly, even if this occurs at the very commencement of the administration, if breath is held, or if there is stertor, the inhalation should be stopped until the breathing is natural again. This may sometimes create delay and inconvenience with inexperienced administrators, but experience will make any administrator so familiar with the respiratory functions under chloroform that he will in a short time know almost by intuition whether anything is going wrong, and be able to put it right without delay before any danger arises.

XI. If the breathing becomes embarrassed, the lower jaw should be pulled, or pushed from behind the angles, forward, so that the lower teeth protrude in front of the upper. This raises the epiglottis and frees the larynx. At the same time it is well to assist the respiration artificially until the embarrassment passes off.

XII. If by any accident the respiration stops, artificial respiration should be commenced at once, while an assistant lowers the head and draws forward the tongue with catch-forceps, by Howard's method, assisted by compression and relaxation of the thoracic walls. Artificial respiration should be continued until there is no doubt whatever that natural respiration is completely re-established.

XIII. A small dose of morphia may be injected subcutaneously before chloroform inhalation, as it helps to keep the patient in a state of anæsthesia in prolonged operations. There is nothing to show that atropine does any good in connection with the administration of chloroform, and it may do a very great deal of harm.

XIV. Alcohol may be given with advantage before operations under chloroform, provided it does not cause excitement, and merely has the effect of giving a patient confidence and steadying the circulation.

The Commission has no doubt whatever that, if the above rules be followed, chloroform may be given in any case requiring an operation

with perfect ease and absolute safety, so as to do good without the risk of evil.—*Lancet*, January 18.

NOTES ON A CASE OF WEIL'S DISEASE.

BY E. H. YOUNG, M.D. DURH., L.R.C.P., D.P.H., ETC.

At 7 A.M. on May 14th I was sent for to see T. H—, aged twenty, who was said to have had a "stroke." On reaching the house at 8.30 his friends gave me the following history. Patient has always enjoyed the best of health, and has had no serious illness. On the 10th he returned from his annual Yeomanry training at Barnstable, being then in the best of health. On Sunday (12th) he took his food with his usual good appetite, and in the evening he walked to chapel, four miles away. When returning home he suddenly became "shivered," had severe headache and an aching pain in the legs, the latter being so severe that he thought he should never reach home, and was obliged to take frequent rests on the way. He went straight to bed, forgetting, however, to remove his stockings. He slept well through the night. The next morning (13th) he got up somewhat later than usual, but no sooner was he down stairs than he sat in a chair and became drowsy and stupid. When aroused, he said that his head ached, that he felt sick and had pains in his legs. He would not take any food. He was at once helped back to bed, three aperient pills were given, and his head bathed with cold water. Throughout the day the drowsiness increased. When spoken to he replied very briefly, and said that headache, nausea, and pains in the legs continued. He refused food of all kinds. Towards evening he became more unconscious, was delirious, and answered questions incoherently. He had passed no urine since 6 P.M. on the previous day.

May 14th.—At 3 A.M. his bowels were opened. Motions rather pale, semi-liquid. His mother thinks a very little urine was passed at this time. At 8.30 A.M when I first saw patient, his condition was as follows: Lying in bed on his back, eyes closed; took no notice of my entry. He is a tall, well made, muscular young man. Features a little blurred, cheeks rather dusky. His skin has a very slight yellow tinge, so slight that his friends had not noticed it. His mental condition is one of apathy; he replies in monosyllables, often incorrectly. Says he has no headache and does not feel sick, but feels pain in the stomach (region of liver), and his legs feel sore. Nothing abnormal was detected in the chest or abdomen, but there was tenderness on pressure over liver and spleen, especially the former. No alteration in hepatic or splenic dulness. Tongue covered with a thick, moist, yellow fur. Eyes injected; pupils equal, rather dilated, react sluggishly. No paralysis or œdema. Temperature 101.4°. Pulse regular, full, 104 per minute. Respiration 12 per minute. There is marked prostration of strength. I ordered complete abstention from food, hot poultices over the liver, and gave a powder of calomel and compound jalap powder, followed by a sulphate of soda mixture. At 2 P.M I was again sent for, as the patient was said to be worse. On arriving at 3 P.M I found that after I left this morning he had complained of severe abdominal pain, which was relieved on his passing a motion. The motion was liquid and of a tarry colour. His general condition remains the same, except that he is perspiring freely and the pulse is more relaxed. Ophthalmoscopic examination (for which the lids had to be held up) showed the discs were clear and healthy, but the veins rather full. Before leaving, the patient passed about an ounce of urine, which was slightly tinged with bile, clear when passed, but speedily became turbid: highly acid; contained no albumen. Microscopically, it showed a large quantity of uric acid crystals, amorphous urates, and some oval colourless plates. No blood or casts.

15th.—11 A.M.: After I saw him yesterday afternoon he remained in much the same condition of stupor, becoming delirious at night. At 4 this morning he seemed to sleep quietly, and on awaking at 8 said he felt better. His aspect this morning is distinctly brighter, but tendency to stupor still marked. He is not so dusky about the cheeks, and the veins of the eyes are less full. His skin has a more distinct jaundiced hue. He still complains of pain over the liver, increased by pressure. Has no other pain, but says his head feels "funny." Appetite bad, declines taking any food. Pulse 72, regular, good strength. Temperature 102.4°. His

bowels have been opened twice since yesterday. Motions liquid, tarry. Has also passed six ounces of urine of the same character as before.

16th.—3 P.M.: The patient passed a good night, and had no delirium. This afternoon he is much brighter, and talks with his friends. Pupils widely dilated. Bowels open once, motion still tarry. Has passed nearly a pint of urine. He still has slight tenderness over the liver, but no other pain. Says he is not hungry, but very thirsty. Tongue cleaning; jaundice about the same as yesterday. Temperature 100.2°; pulse 48, regular, good.

18th.—3.P.M.: Patient has been going on well since last note. Tongue cleaner. Appetite still bad. Jaundice diminishing. Motions normal. No tenderness over liver, Temperature 98.4°; pulse 44, regular, good. The patient went on well after this. He sat up for an hour on the 19th, but felt very shaky. On the 24th he went out of doors and quickly regained appetite and strength.

Remarks.—I think the above notes on a case of Weil's disease worth publishing, as so few cases have thus far been recorded in this country. The points of interest in the case are: 1. The early onset of severe nervous symptoms, the patient becoming *drowsy* within an hour or two of the initial rigor, and delirious within twenty-four hours. 2. Although no albumen, blood or casts were detected in the urine, there can be no doubt, from the fact that only one or two ounces of urine were secreted in forty-eight hours, that the kidneys were affected by the disease. 3. The rapid recovery of the patient, which was very probably *not* influenced by the treatment pursued In all probability the symptoms were due to some toxic (perhaps specific) agent in the blood; but whether introduced by food, water, or air, I am unable to say. It is very probable though that the poison was absorbed during his absence from home. I may add, however, that my patient is not aware that any of his camp comrades suffered in a similar way.—*London Lancet.*

THE SIGNIFICANCE OF ERYTHEMA.—Erythema multiforme is more and more growing in importance as a symptom or precursor of not a few grave diseases. It does not do for us now to regard an attack of it as simply due to indigestion. It has been shown that the occurrence of erythema may mark the beginning of typhoid fever, may occur as one of the symptoms of acute or chronic malarial disease, may be a manifestation of a rheumatic or lithæmic state, or may even, as it were, be an abortive manifestation of any of these diseases. Our attention is again drawn to the fact by Dr. Moncorvo, of Rio de Janeiro, who, in a recent number of the *Revue mensuelle des maladies de l'enfance*, reports two cases of erythema nodosum occurring in the course of acute malarial disease, and yielding promptly to quinine.—*N. Y. Med. Jour.*

ELECTROLYSIS as a mode of treating disease does not make rapid progress in public favor over here, but Dr. Steavenson, of St. Bartholomew's Hospital, is one of the few exceptions to the general rule, and has given it an extended trial in cases of stricture of the urethra with Mr. Bruce Clarke. The latter has lately placed on record the results, as far as they are known, in fifty cases; of these, twenty-three patients were known to be well at periods after the operation varying from a year and a half to three years, in two cases no relapse had taken place at the end of four years, while only nine had required subsequent treatment. These results must be considered excellent, but the difficulty is that all persons are not equally competent to undertake the treatment, a fact which probably accounts for the failures of so many operators and the consequent disfavor with which this treatment is mostly regarded.—*London Letter, N. Y. Med. Jour.*

A DIET OF LEAN MEAT AND WATER.—I have been anxiously looking for some replies to the very interesting question raised by Dr. Herschell's paper in *The Lancet* of Nov. 9th. I entirely agree with him that the time has arrived when our views as to animal diet should be reconsidered. For two years past I have been treating obese patients for limited periods on a diet mainly of lean meat and water, and I must emphatically say such a diet is well borne, and is greatly beneficial to the general health, especially in those cases previously suffering from dyspepsia, and the experience of over 200 cases leads me to think that the diet may be persisted in without any ill effects for long

periods together. In most of my cases the average loss in weight was from 2 to 3 st. and 12 in. in abdominal girth. The stored carbon rapidly disappears. The Terra del Fuegans at Westminster, as Dr. Herschell urges, are good specimens of a diet almost entirely confined to lean horseflesh and water, and the all-important questions raised should be fully discussed. I agree with all Dr. Herschell puts forward, but wish to add my mite of experience gained in treating obesity by largely diluted animal food, in order to elicit from some of the well-known men who make dietetics a specialty their views on Dr. Herschell's carefully considered paper.—*W. Towers-Smith in The Lancet.*

PROLAPSUS RECTI DUE TO LARGE STONE IN THE BLADDER OF A CHILD THREE AND A HALF YEARS OLD—REMOVAL CURE.—Mary X., three and a half years old, came under my notice as a dispensary patient in November, 1888, with the following history, as furnished by the mother: About one year before presentation the child's gut was found prolapsed after each stool, and she appeared to be in great pain in passing her urine. She was taken to a number of physicians and dispensaries for treatment, and presented at almost all the clinics as a case of inveterate and severe prolapsus recti, and many methods of treatment were tried without affording the child the slightest relief or improvement. At my first examination I found the child to be anæmic, nervous, and cachectic in appearance, and suffering from diarrhœa and bronchitis. The rectum was prolapsed two inches, and during the examination it came down fully seven inches, and presented a slightly bleeding surface. A straining effort on the part of the child forced urine from the bladder, which was collected, and found to contain pus and much epithelium, as evidence of cystitis.

The sphincter ani was relaxed to such an extent that three fingers could be passed through it without an effort. The child was then anæsthetized, and a more careful examination showed the presence of a large stone, free, in the cavity of the bladder.

Speedy removal of the stone was suggested, and the suprapubic operation decided upon, on account of the large size of the stone and the facility of access by this operation.

The bladder was first thoroughly irrigated with a warm solution of boro-salicylic acid, and, after division of the skin in the linea alba, the patient was put in Trendelenburg's position, with head low and raised pelvis, by which means it was comparatively easy to avoid the reflection of the peritoneum.

It was not found necessary to raise the bladder by inflating the rectum,—two fingers of an assistant passed into the rectum being sufficient to bring bladder and stone into a convenient position above the symphysis. The bladder was now incised and the large stone removed with some difficulty, thereby producing slight laceration of the margin of the incised bladder.

Owing to this slight and unavoidable laceration primary union was not contemplated, but the bladder was sutured, nevertheless, and the wound filled with loose iodoform gauze, and the usual antiseptic dressing applied. The temperature of the patient was normal throughout the entire healing process, except on the third day after operation, when it rose to 102° F. for a few hours. The process of healing was all that could be desired, excepting a small leak in the suture, which was detected on the fourth day. At the end of three weeks the wound had closed,and the child was discharged cured.

During the time of convalescence the rectum came down once, and not again afterwards. The stone—which I here show you—is twice as large as a pigeon's egg and weighs twenty grammes.

Its presence in the bladder of the child had evidently caused the rectum to prolapse as a direct consequence of frequent straining, and its removal permitted the parts to assume their normal and natural condition.—*A. Caillè, M.D., New York, in Archives of Pediatrics.*

THERMO-PALPATION.—It has been known for some time that there is a difference in the surface temperature of the body corresponding to the organs underneath—that is to say, the temperature is higher over the lungs than over the liver or the heart. From a communication published in the *Orvosi Hetilap*, one of the

chief medical journals in Hungary, by Herr Jonas and Dr. Benczr, it appears that this fact is available as a basis for a novel method of physical examination which may be styled "thermo-palpation." These observers say that it does not require any peculiar sensitiveness of touch or any special education to appreciate the difference of temperature on passing the fingers over the surface of the body from the situation of the lungs to that of the liver, and that patients themselves, and students who had not yet learned percussion, were quite able accurately to detect the height of a pleuritic effusion by the difference of temperature. Diseased and healthy organs can be mapped out in this way by going over the surface, first say, downward and then upward, when the line of demarcation will be distinctly felt. The general principle appears to be that organs containing air, such as the lungs and intestines, permit of greater surface warmth over them than more solid organs, such as the heart, liver, spleen, etc. Of course, instead of using the fingers, a differential thermometer may be employed, and much slighter differences may be recognized than is possible by the touch alone.—*The Lancet.*

THE BACTERIA IN PERITONITIS BY PERFORATION.—In the first fasciculus of *La Cellule* for 1889, La Ruelle gives the results of a series of bacteriological investigations on cases of peritonitis, produced by intestinal perforations. He examined the peritoneal contents of two patients in whom perforation had been produced by strangulated hernia, and six animals (four dogs and two rabbits), in which perforations had been artificially produced in various ways.

In four cases, his microscopic preparations and gelatine cultures indicated the exclusive presence of one form of bacillus. In the other four, this bacillus constituted the immense majority of the organisms present in the peritoneal exudations.

This bacillus he found on cultivation to be identical with Escherich's bacillus coli communis, and, from the examination of the intestinal contents, not only of infants, but also of adults, and of various animals, he finds that it constitutes, in some cases, the only organism, in others, 95% of the organisms present.

In order to determine the role played by the bacillus coli communis in peritonitis, he injected it into the peritoneal cavity of a large number of dogs and rabbits, and obtained varying results, according to the conditions under which the experiments were performed.

If he mixed a quantity of the cultivated bacillus with sterilized physiological salt solution, there were noticed general symptoms of poisoning, presumably due to the ptomaine produced by the bacillus, but in no case, peritonitis.

If he mixed, however, the bacilli with a sterilized emulsion of intestinal contents in bile, he obtained, every time, well marked peritonitis. As control experiments, he injected animals with sterilized bile and intestinal contents, without obtaining peritonitis.

A histological study of the peritoneal lining showed that, although the bacillus alone produced certain changes in the endothelial cells, still they were slight. In cases, however, where the intestinal liquid was injected without the bacillus, the endothelial cells underwent extensive degeneration.

He concludes, therefore, that the bacillus coli communis produces peritonitis in cases of intestinal perforation, but that it is assisted by the intestinal contents, which prepare the way for it by their action on the endothelial cells, and also provide it with a quantity of food material for further development.

The bacillus, he considers, has a two-fold action; first a general toxic effect on the system, by the production of a ptomaine; and second, a direct inflammatory effect upon the peritoneal lining. J. J. M.

NON-TUBERCULAR AND NON-CARDIAC HÆMOPTYSES IN ELDERLY PERSONS.—Sir Andrew Clark (*British Medical Journal*, October 26 1889) says that, at one time believing that every case of pulmonary hemorrhage was due to pulmonary tuberculosis, or malignant growth, or to aneurism or disease of the heart, a case was finally brought to his notice which not only convinced him of the error of this view, but revealed a distinct cause for pulmonary hemorrhage. This patient was a man, of about fifty or sixty years of age, suffering from moderate progressive osteo-arthritis and subacute bronchitis

with some emphysema. The heart and bloodvessels appeared sound. Very soon he began to cough up blood in small quantities at short intervals, and, in spite of all treatment, died from hemorrhage within a week. The autopsy revealed isolated patches of emphysema surrounded by hemorrhagic extravasations in the back and lower part of both lungs. Nowhere could there be discovered the slightest evidence of structural change, which would have accounted for the hemorrhage. A microscopical examination showed that the seat of the bleeding was in the immediate neighbourhood of the patches of emphysema, and that the minute terminal arteries in these localities were always diseased. There seemed to be a causal relation between the emphysema, the hemorrhage, and the condition of the bloodvessels. The author was led to conclude that the initial change had been some minute structural alteration in a terminal branch of the pulmonary or bronchial artery; that in consequence there had been a more or less complete obstruction to the blood supply of the territory involved; following this there had arisen degeneration of the capillaries and venous radicles, determining a true atrophic emphysema; that the impairment of the vessel walls had brought about the hemorrhage which ended in death. The structural changes in the affected bloodvessels were limited to nuclear proliferation in the middle coat, and an amorphous and hyaline infiltration of it and the intima. As the patient had for years been a well-marked arthritic, and as the lesions described were akin to those which are found in the diseased articulations, the author concluded that the affection was of an arthritic nature, and might be called "arthritic hæmoptysis."

Some years ago he had under observation a very similar case, in which fatal hæmoptysis occurred in the person of a typically arthritic man, and in whom the autopsy revealed a condition practically identical with that described in the first patient. In the last fourteen years he has seen about twenty cases of hæmoptysis of this kind, some of which he details, occurring in persons over fifty years of age. He draws the following conclusions regarding the affection and its treatment:

1. There occurs in elderly persons, free from ordinary diseases of the heart and lungs, a form of hæmoptysis arising out of simple structural alterations in the terminal bloodvessels of the lung.

2. These vascular alterations occur in persons of the arthritic diathesis, resemble the vascular changes found in osteo-arthritic articulations, and are themselves of an arthritic nature.

3. Although sometimes leading to a fatal issue, this variety of hæmoptysis usually subsides without the supervention of any coarse anatomical lesion of the heart or of the lungs.

4. This variety of hemorrhage, when present, is aggravated or maintained by the frequent administration of large doses of strong astringents, by the application of icebags to the chest, and by the restricted indulgence in liquids to allay the thirst which the astringents create.

5. The treatment which appears, at present, to be the most successful in this variety of hæmoptysis, consists in diet and quiet; in the restricted use of liquids, and the stilling of cough; in calomel and salines; in the use of alkalies with iodide of potassium; and in frequently renewed counter-irritation.—*Amer. Jour. of Med. Sciences.*

DIAGNOSIS AND TREATMENT OF AORTIC ANEURISM.—At a recent meeting of the Medical Society of London, as reported in the *Brit. Med. Journal*, Dr. R. Douglas Powell opened a discussion on the diagnosis and treatment of aortic aneurism; clinically he considered that all the features of aneurism were grouped about the sacculated form; that in regard to clinical signs and treatment, the fusiform variety merged into the form of heart disease with which it was associated. In the fusiform variety the signs were manifested about the commencement of the vessel, no pressure signs were observed, and death occurred from cardiac failure, angina or syncope, the treatment was that appropriate to the heart condition. The essential phenomena of the—clinically—true or sacculated aneurism were:

First, those of pressure tumor signs; secondly those indicative that the tumor was a vessel tumor. To attach too much importance to the second of these signs without sufficient inquiry for those of tumor, was to invite error in diagnosis. Dr. Powell referred to those cases of abdominal aortic pulsation, where by paying

too much attention to signs of vessel disorders, and not enough to pressure signs the case will be mistaken for one of aneurism. A systolic murmur when heard over a localised area, remote from the heart, was of value in diagnosis, but in about half the cases of aneurism no murmur was present. A diastolic murmur was of great diagnostic value, for it furnished distinct evidence of intra-arterial disease and if associated with the pressure signs of tumor, the aneurismal nature of that tumor was almost demonstrated. Thrill was a comparatively rare sign in true aneurism. Of the signs symptomatic of vessel disease, Dr. Powell especially mentioned a systolic jog often appreciable to the ear, through the medium of a rigid stethoscope, and, of greater importance, the diastolic stock sound in many cases could be similarly appreciated. Dr. Powell regarded Tufnell's method of treatment as most valuable, especially in cases of abdominal aneurism, and of sacs pressing deeply on vital parts. Tufnell's method, (1) diminished the cardiac beats, and therefore the aneurismal distensions by many thousands daily; (2) it reduced blood volume, and was said to inspirate and render more fibrous the blood; (3) it reduced blood pressure, slowed the current through the aneurism, and so favored conditions for clotting from the periphery. Dr. Powell condemned the wire and galvano-puncture treatment, as causing clotting in the centre rather than from the circumference of the aneurism.

Dr. Broadbent agreed with Dr. Powell that fusiform aneurism was not amenable to any treatment; the only thing was to lower the general intra-arterial pressure, enjoining rest if otherwise necessary, but not with the idea of promoting a cure. Dr. Broadbent attached a good deal of value to potassium iodide in the treatment of aneurism; his explanation of its action was that it virtually effected the same thing as the Tufnell treatment, draining off the fluid by the kidney and so inspirating the blood. Alluding to Dr. Sibson's plan of treatment by ergot, he said it unquestionably diminished the size of the tumor, though this was not due to its specific action on the muscular fibre in the sac wall, since he had never been able to discover any there.

Dr. Ord insisted on the diagnostic value of local signs—pulsation, murmur, thrill, shock, dulness, undue pulsation, etc. and said he looked to pressure signs to complete the diagnosis. In treatment he had found Tufnell's method very beneficial, but generally associated it with iodide of potassium. He confirmed all that Dr. Broadbent had said with regard to the ergot treatment. The dose given by Dr. Sibson, was 20 minims of the liquid extract, with 20 drops of spirits of chloroform, to cover the nauseating tendency of the former.

Dr. Bristowe declared himself a pessimist in reference to treatment. He thought that drugs at most afforded a passing relief. He had no faith in treatment by wire or by galvano-puncture, nor in the iodide of potassium treatment. Patients with aneurism were benefitted by rest, diet, and generally by measures which reduced the intra-arterial blood pressure. He suggested, however, that it was open to question as to whether it was worth while rendering these patients useless members of society for the sake of a problematical prolongation of life for a few weeks or months, and he thought on the whole, that it was preferable to allow them to carry on their usual avocations, even if they died a little sooner, though this did not necessarily follow. He alluded to the cases of Dr. Murchison and Dr. Hilton Fagge, both of whom, though they suspected they were suffering from aneurism, continued to work to the last.

W. P. C.

Therapeutic Notes.

Prof. Bartholow recommends for *habitual constipation* a few minims of wine of tobacco, take at bedtime. It acts by increasing the secretion and causing peristaltic action.—*College and Clinical Record.*

HYPODERMIC SOLUTION OF CAFFEINE—

Benzoate of Soda	70 grains
Caffeine	80 grains
Water	120 drops.

Medical Press and Circular, Jan. 15th, 1890.

AN APPLICATION FOR TOOTHACHE.—The *Progrès Médical* credits Guild with a method of treating carious toothache by means of a mixture

of equal parts of crystallized carbolic acid and flexible collodion, which is to be carried to the bottom of the cavity. The pain is said to disappear instantaneously.

ANTIPYRIN IN THE TREATMENT OF WHOOPING COUGH.—Dr. Windelschmidt, of Cologne, treated 350 cases with antipyrin. In thirty per cent. antipyrin had no effect, or the patient passed away from observation; in fifty per cent. the result was very good, the duration of the attack being reduced to two or three weeks. To obtain the best results the antipyrin should be given as early as possible, and three or four times a day, in a dose of 1½ grains for each year of the child's age.—*Centralblatt für die ges. Therapie.*

For a man suffering with *gastric ulcer*, brought before the clinic by Prof. Da Costa, the following was directed to be rigidly carried out: Absolute rest on the back in bed, milk diet, in which a small quantity of carbonate of soda is put, to render it alkaline; should this not sufficiently nourish him, then combine with the milk diet nutrient enema. For the anæmia accompanying the disease—

℞. Ferri et potassii tartrat., ʒij
Glycerini, . ʒj
Aquæ, q. s. ad fʒijj M.

SIG.—Teaspoonful three times a day.—*College and Clinical Record.*

PHENACETINE OR PARA-ACETPHENETIDINE is one of the aromatic series of compounds discovered in the effort to find an artificial product possessing the properties of quinine.

It is an excellent antipyretic and analgesic, superior to antipyrin in that it is cheaper, given in smaller dose, and without any unpleasant after-effect, save perspiration. As an antipyretic, 7 grains cause a fall in the temperature, commencing in about half an hour, accompanied by sweating, the minimum being reached in three or four hours. Although the sweating is more or less profuse, collapse or chill is never observed. It is said that it may be administered for months without any unpleasant consequences, although it seems to lose somewhat of its effect. Its antipyretic action may be made use of in any febrile affection.

In the same dose, 7 or 8 grains, it gives great relief in one or two hours in the various forms of neuralgia.

During the epidemic of influenza, it has been given very generally in doses of 7 to 12 grains, repeated every half hour, and whilst causing in most cases profuse perspiration, has speedily relieved the frontal headache and the vice-like pains felt in the loins and extremities.

THE
Canadian Practitioner
A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, FEBRUARY 17, 1890.

HYDERABAD CHLOROFORM COMMISSION.

The number of the experiments, the care and accuracy with which they have been performed and recorded, the high reputation of the members of the Commission, demand for the conclusions a careful, even if incredulous, consideration. To be told that the danger of chloroform is not from syncope, but from respiratory failure, that stimulation of the vagi is a safeguard, not a danger, that fatty heart is not a contra-indication to its use, is indeed a shock to medical orthodoxy.

Death is said to occur once in every 3000 cases of chloroform anæsthesia, but Surgeon Major Laurie has given chloroform more than 10,000 times without a single mishap. He says that careful examination of all the recorded cases of death from chloroform in Great Britain, since 1885, shows that in not one case did death occur when the respiration, and the respiration alone, was attended to.

It must not be supposed that the Commission teaches that chloroform is absolutely safe. Death may occur, but now it must be ascribed to carelessness of the chloroformist. Chloro-

form retains all its old properties : we have merely gained more knowledge as to these properties.

THE CONTEST IN THE BATHURST AND RIDEAU DIVISION.

There will not be many election contests for representation in the Ontario Medical Council, for the next session. The majority of the old members will be elected by acclamation. In Bathurst and Rideau, however, there will be a lively contest between the former representative, Dr. Cranston, of Arnprior, and Dr. A. F. Rogers, of Ottawa. It is thought by some that, as Dr. Cranston has represented the Division for nine years, he should now retire, and allow a new man to enjoy the honors. A number of the physicians in Ottawa think, in addition, that, as the rural portion of the Division has had the representation for ten years, the city should now be allowed to choose the representative.

The new candidate is a worthy physician, in good standing in Ottawa, and we believe his friends are correct in thinking that, if elected, he will prove a good member of the Council. One of the principal planks in his platform is the contention that every student should be compelled to graduate in arts before he commences the study of medicine. We think we can say, with considerable confidence, that the vast majority of the profession in the Province will not agree with Dr. Rogers.

It is only simple justice to Dr. Cranston, the honored President of the Council, to say that in the past he has been one of the most efficient and fair-minded members of that body. We are not disposed to make any suggestions in the matter of the election, believing that the residents of this Division are capable of making an intelligent and judicious choice; but we think that those outside of Rideau and Bathurst, who have watched carefully the proceedings of Council for many years, will be well pleased to see Dr. Cranston again returned to his old position.

ONTARIO MEDICAL ASSOCIATION.

The tenth Annual Meeting of the Ontario Medical Association will be held in Toronto June 4th and 5th, under the Presidency of Dr. J. Algernon Temple.

If the papers already promised may be taken as a criterion, the meeting bids fair to be even more successful than that of last year.

In the Surgical Section, Dr. M. Sullivan, of Kingston, will read a paper on Hernia; the discussion willl be taken up by Dr. L. McFarlane of Toronto and Dr. Waugh of London.

Dr. A. S. Carson, of Toronto, will in the Obstetrical Section deal with "The Prevention of Post-Partum Hemorrhage." Dr. Powell, of Ottawa, and Dr. Allen Baines, of Toronto, will throw additional light on this important subject.

In the Ophthalmological Section, Dr. Ryerson, of Toronto, will read a paper on "The Ophthalmoscope in Relation to Diseases of the Nervous System." Drs. Palmer and Wishart, of Toronto, will discuss the paper.

Arrangements have not yet been completed for the Sections in Medicine and in Therapeutics.

A paper on "Duodenal Ulcers" is promised from Dr. J. H. Duncan of Chatham. Dr. Andrew Smith, of New York, will contribute a paper, illustrated by apparatus, on "Empyema, with Mechanical Results of Opening the Thorax."

The members of the Association will be gratified to know that Dr. Goodell, of Philadelphia, and Dr. Emmett, of New York, have expressed their intention to be present and to take part in the proceedings.

It is requested that any member who intends to present a paper will, as soon as possible, send the title of his paper to Dr. J. E. Graham, Toronto, Chairman of Committee on Papers, or to Dr. D. J. Gibb Wishart, Toronto, Secretary of the Association.

A CITY'S REFUSE.—The ordinary refuse of the city is greater than most people would suppose. The *Medical News* calls attention to the fact that the Street Commissioner of New York has given a contract to trim the garbage scows to an Italian, who agrees to pay $1552 per week for the privilege, or $80,704 per year. The contractor employs men to pick over the refuse while trimming the scows, and from what they hand over to him, he is able to secure a large profit.

Meeting of Medical Societies.

NEW YORK ACADEMY OF MEDICINE. SECTION ON ORTHOPÆDIC SURGERY.

Stated Meeting, Jan. 17th, 1890.
V. P. Gibney, M.D., Chairman.

Dr. W. R. Townsend presented a case of

CONGENITAL TALIPES; RIGHT EQUINO-VARUS, AND LEFT CALCANEO-VALGUS.

The case was of considerable interest on account of its rarity. Mr. Tamplin states that out of 764 cases where the deformity was congenital, there were only 15 in which there was varus of one foot and valgus of the other; and only 19 cases of calcaneus. Dr. Townsend said that this case came to him at the Hospital for Ruptured and Crippled on Dec. 23rd, when only ten days old. It was the mother's second child, and the labor had been normal; there was no history of club-foot in the family. He had already commenced treatment of the right foot, and consequently the deformity was not so marked as when he had first seen the case.

Dr. A. M. Phelps said that this was only the second case of the kind that he had seen; and in connection with it, he desired to present a plaster cast of two feet removed from the womb of the mother after her death at the sixth or seventh month of utero-gestation. It showed equino-varus of the left, and calcaneo-valgus of the right foot, and was an admirable example of the manner in which the deformity had been produced by the pressure of the uterus. There was no history connected with it beyond what had been stated. The original is in Prof. Volkman's museum at Halla, Germany.

Dr. John Ridlon remarked that the chief interest in this class of cases is connected with the subject of their causation. He had seen only one other case, which was shortly after the publication of Dr. H. W. Berg's paper on this subject. This patient had the same deformity, and in addition, clubbed hands on both sides.

Dr. V. P. Gibney did not think he had seen more than three or four such cases in an experience of eighteen years. He thought that the retarded rotation theory, as explained by Dr. Berg, accounted very well for these cases.

Dr. A. B. Judson said in regard to the foot affected with calcaneus, that although at first sight it appeared to be a severe deformity, it was quite amenable to treatment, and cited a case published by Dr. Churchill of Iowa in support of this assertion, in which he advised simple manipulations, and made an appointment to do a tenotomy one month later. At the end of that time, he was surprised to find that the deformity had entirely disappeared. In another similar case reported by Dr. Prouty, of New Hampshire, the trouble was entirely remedied by the same simple manipulations, so that when the child began to walk, the foot was absolutely normal.

A remarkable case had been reported by Dr. Gibney a few years ago to the N. Y. Pathological Society, in which the calcaneus was so extreme that the digits had made indentations on the anterior part of the leg.

The paper of the evening on "The Operative Treatment of Talipes Calcaneus, Paralytic," was read by Dr. V. P. Gibney, who exhibited eight patients illustrating the advantages of the operation described in his paper. This operation was that which Mr. Willett, of St. Bartholomew's Hospital, published in the St. Bartholomew's Hospital Reports, in 1880. The technique is as follows: A large Y-shaped incision over the posterior aspect of the leg, lower fourth, the stem of the Y ending at the os calcis,—the stem itself about one and a half inches in length, while each side of the V-shaped portion is about two and a half inches long. The incision exposes the sheath of the tendon. The V-flap is then dissected, the sheath is opened, and the tendo Achillis raised from its bed by a curved director. A strong catgut ligature is passed through the upper portion of the tendon to serve as a means of preventing retraction after section; and the tendon is cut through obliquely, this section being made as oblique as possible. With the Vulsellum forceps, each end of the tendon is grasped, and the upper portion pulled down towards the os calcis, while the foot is fully extended and the knee slightly flexed.

The tendon is sutured together with catgut, back and forth, with about three or four heavy sutures; and the end of the V-flap brought down to the end of the stem, and the edges sutured, taking every alternate stitch through the tendon itself.

The aim is to convert the Y-shaped wound into a V-shaped cicatrix. It is better to use catgut altogether, in order that the wound may not be disturbed for three or four weeks. Dressings and plaster of Paris, which extends from the toes up to the middle third of the thigh, the knee being flexed to an angle of about 120 degrees, and the foot extended to the full limit, complete the procedure. The operation practised by the reader of the paper differs a little from that of Mr. Willet, in the following particular: Mr. Willet used wire and exsected a portion of the tendon. The wire he used was merely for fastening the ends of the tendon together. The objections offered to his mode were that the wire cut through the tendon, and that one was in danger of removing too much tendon.

The paper was based upon an analysis of 28 cases operated upon during the past six years. The results showed 17 good, 8 fair, and 3 poor. The term "good" was defined as a useful foot without any relapse after a sufficiently long time; ability also to walk without a brace or support of any kind. "Fair" was defined as a slight stretching of the cicatrix, but not enough to impair the usefulness of the foot. Shoes with the heel raised and a steel tongue are also required to make the gait satisfactory. "Poor" referred to those cases where the cicatrix had stretched and the deformity had relapsed.

The general results, however, were very satisfactory. The time elapsing between the operation and the date of last observation was as follows:

From 3 to 12	months,	9
From 1 to 2	years,	15
From 2 to 3	years,	1
From 3 to 4	years,	1
6	years,	1
5	years,	1

16 healed by first intention, 12 by granulation. Of those healing by primary union, 10 were good, 3 fair, and 3 poor. Of those healing by granulation, 6 were good, 5 fair, and 1 poor. In those where granulation took place, the tendon sloughed in 3 instances, and a portion was removed through the wound. In no instance was a brace required, but particular attention was given to the building of the boot or shoe. The instructions were to have the heel raised at least one inch, to have a stiff counter, and a leather tongue reinforced by tempered steel. The hopelessness of paralytic calcaneus was discussed at length; the difficulty of correcting the deformity by means of apparatus; the great strain on the spring itself; the frequency of breakages; and the unsatisfactory results generally.

Dr. Joseph D. Bryant said that he had been especially interested in the statement regarding the changes which in many cases occur in the length of the new tissues which had been connected by the operation with the tendo Achillis. The subject was of much importance as bearing upon the question of the behavior of cicatricial tissue elsewhere in connection with the repair of deformities of another kind; and although it does not follow that because fibrous tissue in this particular situation retracts after the force has been taken from it, that fibrous tissue will do the same thing elsewhere, the subject becomes of immense practical importance in connection with the recent methods for the radical cure of hernia. If we study the behavior of the cicatricial tissue of burns when put on the stretch, we shall find that it will stretch, but that when released, it will return to its former position, or even become more contracted. Such tissue might properly be compared to rubber which is tireless, while the tissue concerned in the operation under discussion might be looked upon as rubber which has become tired.

He would like to know if one of the cases which showed such extreme loss of power was likely to be benefited by a repetition of the operation.

Dr. C. A. Powers was particularly interested in the subject of tendon suture of the hand and wrist, in which he had had a considerable experience. He had become convinced that careful antiseptic suture of these cases, with proper rest of the parts, yielded uniformly good results. Primary union seemed to be a requisite for a good functional result in hand and wrist cases; for, when healing took place by granulation, the tendons became caught in the cicatrix and there bound. He would like to know in what proportion of cases the author had secured primary union, and how the result seemed to be modified when healing took place by granulation.

Dr. R. H. Sayre had noticed that some of the patients exhibited were able to move the heel independently of the long flexor of the great toe, and he supposed that as the paralysis had been only partial, the shortening of the tendon had enabled the weakened muscles to act to better advantage. Such cases ought to be much benefited by the persistent use of massage and galvanism, and they present a much more favorable field for operation than those in which the paralysis is absolute; for, under such circumstances, shortening of the tendon only results in the formation of an unyielding fibrous cord.

The progress of the deformity when untreated must depend largely upon the amount of damage originally done to the spinal cord. He had seen patients with very marked cavus, who, instead of walking on the bottom of the heel, walked upon the posterior portion, which had in consequence developed an elastic buffer. He had hesitated to interfere, as such cases do not hold out much hope of improvement, and the gait is much better than the appearance of the foot would lead one to suppose was possible.

As regards treatment, he favored the use of a brace similar to the one described by Dr. Gibney, or with an elastic spring to take the place of the gastrocnemius. Such an appliance will give the patient comfort, and enable him to move about with less of a wooden tread.

The results shown in the cases this evening are exceedingly good, but he was surprised at the amount of stretching which the cicatricial tissue had apparently undergone. The usual plea against tenotomy is that the resulting scar tissue tends to contract and reproduce the deformity. This, he thought, was a mistake; for the tissue obtained after a subcutaneous tenotomy is not at all comparable to that obtained in an open wound by the process of granulation. There should be no more secondary contraction after a non-suppurative subcutaneous tenotomy than occurs in tissues after aseptic healing by blood-clot. Whatever elongation has occurred in the cases shown this evening in all probability took place, not in the cicatrix, but in the muscular fibres above, the paralyzed muscle being constantly antagonized by a normal muscle, and thus gradually stretched out.

Dr. Ridlon said that one of the patients exhibited had been seen by him last summer, and he had then strongly favored tenotomy on account of extreme equinus which then existed; but he saw that the foot was now in good position.

In the mechanical treatment of this condition, he had been accustomed to employ the apparatus with the "rubber muscle" at the back; but since Bernard Roth of London published the description of his brace for drop-toe with tempered spring at the back of the leg, he had considered that such an instrument, having a spring running from the garter line with a steel plate to the ball of the foot, was much better than those ordinarily in use.

Dr. H. W. Berg was inclined to take a gloomy view of these cases of polio-myelitis, yet he did not consider them entirely beyond help from neurological treatment. Were it conclusively proven that the nervous supply of the posterior group of leg muscles, for instance, is entirely derived from one level of the anterior gray horns in the spinal cord, or from one series of cells in the spinal cord, it is obvious that if these cells had been entirely destroyed, any electrical treatment must of necessity be useless as regards restoring power to the limb. But it has not been proven that the nervous supply is derived in this way, and it is barely possible that a few cells, giving rise to fibres of any one nerve, have escaped the inflammation. The number of these nerve fibres remaining may be so small as to escape notice in an electrical examination, and yet be sufficient to exert an important influence upon the movements of the foot. Hence, if these healthy nerve fibres and muscle fibres to which they are distributed be stimulated by a galvanic current, they will take on a vicarious action under the irritation of the galvanic current, and will cause even in old cases of poliomyelitis, as he had frequently observed, a decided improvement in the power to extend the foot. In his experience, fully ninety-five per cent. of the cases had been relieved, although none were cured. He did not think that even the most enthusiastic operators claimed that they did more than relieve their cases. A large number would certainly be benefited by the operation described by Dr. Gibney; but any operation including simply the soft tissues was hardly a philosophical one,

and could not be expected to give as good results as one which would fix the bony tissues.

It is evident that in the cases exhibited, the scar tissue has stretched as the children grew older and the weight of the body increased. This result could be postponed but not averted by furnishing a support for the foot.

Dr. Judson said that the difficulty in walking experienced by these patients was due to their inability to use the anterior part of the foot, so that the toe cannot be pressed forcibly against the ground ; and hence, they walk very much like one having a peg leg, or an amputation of the anterior part of the foot.

It has been stated that the aborigines of this country were in the habit of performing Lisfranc's amputation upon their captives, who were thus able to work in the fields, but were incapable of rapid locomotion towards liberty. A patient affected with talipes calcaneus is in practically the same condition.

The object of the operation described this evening seems to be to restore some of this function of the anterior part of the foot, so that the patient, in walking can bring the weight first on the heel and then on the toe ; but it is not easy to understand how the operation can accomplish this, for it is essential that there be very firm union between the calcaneus and the upper extremity of the tibia along the line of the gastrocnemius. With one exception, the cases exhibited could not put their weight on the toe at the same time that the well foot was raised from the ground ; nor is it reasonable to suppose that they will retain for any great length of time the slight connection between these parts. He was inclined to think that a cicatrix resulting from primary union was less liable to contract than one which occurs after a long process of granulation. It is difficult to over-estimate the strain which falls on the tendo Achillis. The great mass of the muscles of the calf gives an indication of this force. The foot may be considered as a lever of the second class, the fulcrum being at the toe, the weight at the ankle, and the power at the heel. The long and short arms of the lever are represented, respectively, by the portions between the ankle and the toe, and the ankle and the heel, and the strain produced by the weight of the body is thus multiplied as it falls on the tendo Achillis.

He thought that much could be done for these patients by mechanical treatment, and the object of his brace was to transfer some of the weight of the body to the anterior part of the foot. In the brace formerly described by him, there was a joint at the ankle to arrest motion at a right angle ; but the brace has been rendered much more durable and equally efficient by the omission of the joint in the present instrument. The weight which naturally comes on the plantar surface of the anterior part of the foot in a well person, with this apparatus comes upon the anterior part of the upper portion of the tibia in the neighborhood of its tubercle ; so that the patient first strikes the heel, and t en puts the weight upon the anterior part of the leg in its upper portion, thereby decidedly improving the gait. The sensation is very much like that of kneeling ; for the weight, instead of coming on the ball of the foot as in the healthy person, comes on that part of the tibia which takes the weight when in the kneeling posture.

These cases cannot of course be cured by the use of such apparatus ; but adult patients are often very glad to wear a simple and durable apparatus which improves the gait.

Dr. Judson remarked that Dr. C. Fayette Taylor had once said that one reason for the muscular degeneration which occurs in these cases is, that the weakened and half paralyzed muscles being compelled to endure such an enormous strain, yield at once ; but if they are relieved by means of an apparatus, of some of this duty, they are less likely to undergo such degeneration, and therefore the chances are better for ultimate improvement.

Dr. Frederick Peterson agreed with the reader of the paper regarding the usefulness practically of the galvanic and faradic currents in these old cases ; for he did not believe that the current could restore destroyed muscle fibre or degenerated nerve fibres or cells.

Dr. H. L. Taylor said that in considering tenotomy one must remember that in most cases not only the muscle but the tendon itself is atrophied, so that it is at times a mere thread. These cases of calcaneus are exceedingly difficult to treat, and any real advance will be very welcome ; but he considered that the mechani-

cal treatment was fairly satisfactory as a palliative measure. We can retain the foot in a position of election for an indefinite period, and improve locomotion by enabling the patient to transfer the weight from the heel to the ball, not of course through the tendo Achillis, but by impinging on the upper end of the tibia by means of an apparatus.

He wished to lay emphasis on the statement that calcaneus could usually be prevented from developing, when these paralytic cases were seen sufficiently early. The foot could be held with absolute precision ; and although he had followed for a considerable time cases of paralysis of the posterior tibial muscles, he could not recall a single one in which calcaneus had developed under proper mechanical treatment.

Dr. Phelps said that in cases of flail foot with absolute paralysis he was accustomed to do an excision, or a Pirogoff's amputation, which is a safe operation providing firm anchylosis can be secured. Unfortunately this is not always obtainable in children. When the tendon unites primarily union takes place by blood-clot, and the result is not cicatricial tissue but a reproduction of the tendon ; and therefore stretching cannot take place in the tendon itself but in the body of the muscle. The same argument has been brought forward against the open operation for club foot, only it has been claimed that the cicatricial tissue contracted ; but when healing by blood-clot follows that operation the cicatricial mass does not contract, nor did he believe it yielded.

From birth up to the third or fourth year, and even later, there is a development of the deformity, and therefore in estimating the beneficial results from any special method of treatment, one must wait a similar length of time before passing upon the result.

He had been much interested in Dr. Gibney's cases on account of the candor with which they had been presented, and the care exhibited in securing careful histories ; but until the ultimate results could be ascertained, he preferred to cut the anterior tendons when required and apply a brace similar to the one which had been presented ; or a brace with a posterior rubber muscle acting on a lever attached to the sole of the shoe ; and in special cases, either Pirogoff's amputation or excision.

Dr. Gibney, in closing the discussion, replied seriatim to the questions that had been propounded.

He could not say whether a second operation in one of the cases would be of any benefit.

He had not entirely completed his table of results, and could only say that about one-half of the cases had healed by primary union, and that his analysis, so far as it had gone, failed to show much difference in the results dependent upon the method of healing. He had, of course, always aimed to secure primary union ; but some of his best results had been obtained in cases in which the granulating process had been tedious, and even where some of the tendon had protruded and had sloughed away, or had required removal.

He was sorry that he was unable to furnish records of systematic electrical examinations in these cases ; but in the hurry of hospital work this portion of the work had frequently been omitted. He had, however, the report of an examination made by Dr. M. A. Starr before the operation on a little boy who had attracted attention by his ability to stand on his toe and on the ball of the foot. Dr. Starr reported at that time, two years ago, that the posterior group of muscles showed well marked reaction of degeneration, and failed to respond at all to the faradic current, and he gave it as his opinion that it was very doubtful if recovery would take place. Dr. Gibney thought that most of the gentlemen present would agree with him in saying that the patient now had considerable power in that posterior group of muscles.

In alluding to electrical treatment he did not intend to disparage all such treatment, but simply to record his own disappointment with it in connection with confirmed cases of calcaneus. He believed with Dr. Berg that if certain nerve fibres still remained intact, they could be developed by appropriate treatment. He was also willing to admit that an operation which secured anchylosis or synostosis was capable of giving a very useful foot ; but from what he had heard of the operation there seemed to be good cause for doubting the permanency of the results. Besides this, the operation was a much more formidable one than that which he had described in his paper, and it would often be impossible to secure the consent of the parents

to perform it, while they would willingly agree to the other operation.

In regard to the mechanical points raised by Dr. Judson, it must be remembered that in addition to the gastrocnemius muscle, the perineal group and some of the interossei are also involved.

In only one of his cases had he met with the ribbon-like form of the tendon, and the result of this case is reported as "poor." When this condition exists the tendon must be brought further down, and particular care exercised in the process of suturing, aiming to have the tendon well imbedded in the V-shaped flap.

Dr. Phelps presented a specimen that was apparently an intracapsular fracture of the femur. It had been removed from a man in the dissecting room, who was noticed to have the legs flexed and abducted, and twenty or more sinuses, healed and unhealed, about the thigh, which had burrowed in every direction. Through a most unfortunate mistake on the part of those who secured the specimen, the soft parts were all carefully removed. The pus is stated to have come from a cavity behind the mass of new bone which is seen in the acetabulum ; and the new joint is found to be perfect. When the specimen was exhibited a few evenings since before the Surgical Section it was thought to be a case of old hip joint disease, but the specimen clearly shows, since sections have been made, that this is not the case, and is of peculiar interest as illustrating the utter impossibility of curing such a case by mechanical treatment. It was a strictly surgical case, and unless the sinuses were followed up and treated by thorough curetting and free drainage with antiseptic precautions, the man must have died, as he did die, from amyloid disease of the liver and kidneys.

Dr. J. D. Bryant concurred in the opinion that this was a case of intracapsular fracture.

A SIMPLE METHOD OF PREVENTING THE BREAKING OF PLASTER AND WAX CASTS.

Dr. Phelps exhibited two casts so treated. He said that in order to render plaster or wax casts almost unbreakable, it was only necessary to rub well the surface of the cast with plumbago, and then by the process of electro-deposition, cover the whole surface with a film of copper about 1 mm. in thickness. To illustrate the efficacy of this method the speaker took one of the specimens, a large cast illustrating Dupuytren's Contraction, and threw it violently upon the floor, without its sustaining the slightest damage.

The other specimen had already been shown at the meeting in connection with Dr. Townsend's case of club feet.

Hospital Reports.

GANGRENE OF THE HAND INDUCED BY A TIGHT SLEEVE—RECOVERY.

UNDER THE CARE OF DR. NEVITT IN THE HOUSE OF PROVIDENCE, TORONTO.

H. H. æt. 3½.

The boy was restless and cross for several days, and complained of his hand, which had become much swollen and painful. The swelling and pain increased, and on Jan. 27th, his mother, on examining the hand, thought that, at a point in the palmar surface, it was "going to break." She punctured it with a needle, but nothing came away, except a drop of clear fluid ; at night she applied a bread and water poultice. Dr. Nevitt saw the case on the following day, when he found the hand and forearm greatly swollen, and of a mottled purplish colour ; the swollen parts felt quite cold ; there was a spot, about the size of a twenty-five cent piece on the palm, opposite the roots of the middle and ring fingers, which had become quite gangrenous. On examination it was found that constriction was caused above the elbow, by a rather tight sleeve, which, there is every reason to believe, had not been removed since the child had first complained of pain. Dr. Nevitt made a free incision in the palm,carrying the knife through the gangrenous area ; this was done with the object of relieving the great tension. There was scarcely any bleeding; a considerable quantity of blood-stained serum however escaped; the operation caused little or no pain. Hot linseed meal poultices were then applied to the entire hand and wrist. The arm was relieved from the constricting influence of the sleeve. Jan. 29th, the swelling was still very great, but the circulation in the hand was much improved During the next two days the hot poultices

were continued, the swelling rapidly diminished and the part assumed a more natural appearance; sensation was completely restored, and free movement of the fingers became possible as the swelling disappeared. On Feb. 5th, the wound had almost healed, and the parts were in a natural condition.

CYST UNDER THE OCCIPITO-FRONTALIS MUSCLE FOLLOWING INJURY —OPERATION— RECOVERY.

UNDER THE CARE OF DR. NEVITT IN THE HOUSE OF PROVIDENCE, TORONTO

L. H. æt. 10.

Last November she was playing with some children and, while running swiftly past the corner of a house, struck her head against a projecting brick, receiving a very severe blow. She cried for a time but soon resumed her play, and thought no more of her head until three days after, when the injured area became swollen and painful.

The swelling, which was situated on the right side of the head, midway between the occipital protuberance and the parietal eminence, increased, and the pain became so severe that she was unable to sleep at night. Hot poultices were applied, and these relieved the pain. Two weeks after the accident the swelling was tapped by means of a trochar and cannula; some pus was withdrawn but the cavity refilled rapidly. Two days subsequently the tumour was opened and a drainage tube inserted, the cavity then seemed to close, but after removal of the tube swelling and pain again occurred.

It was opened a second time, two weeks after the first operation, and a drainage tube inserted; the tube was left in for three or four days and, the discharge ceasing, it was removed.

A few weeks after this Dr. Nevitt first saw the patient; the swelling had reappeared; there was a soft tumour, apparently under the occipito-frontalis muscle, its limits could be fairly well-defined; fluid was contained, without tension, in a loose baggy sac. The scar of the old opening was incised and about two ounces of an oleaginous fluid, sticky to the feel and brownish in color, were withdrawn; strands of catgut were inserted as a drain and a dry absorbent dressing applied; the wound healed readily. The sac, however, refilled, and on January 30th she was put under chloroform, and a free incision was made through the entire length of the tumour, extending from a little above the occipital protuberance to within about one-half an inch of the right parietal eminence. The lining of the cavity was white, glistening, and smooth, the walls gliding smoothly on each other, the floor was apparently formed by the pericranium. The cavity was then stuffed with iodoform gauze, and allowed to granulate from the bottom. It was, at first daily and then every second day, washed out with carbolic acid solution and dressed with the gauze. At the first dressing there was a considerable discharge of pus and blood; but since then there has been very little.

When last seen, February 10th, extensive granulations had formed, quite filling up the cavity, and healing was progressing very satisfactorily.

(For notes of these two cases we are indebted to Miss Mary A. Gifford and Miss L. Graham, students of the Woman's Medical College, Toronto.)

A CASE OF MORPHINE POISONING IN AN INFANT SIX DAYS OLD— RECOVERY.

BY J. R. LOGAN, M.D., M.R.C.S., ENG., GRAND FORKS, N. DAK.

This case has seemed to me to be of sufficient interest and rarity for publication, from the extreme youth of the patient, the length of time elapsing from the apparent death of the child until signs of life were elicited, fully an hour, and the length of time during which electrical treatment was required before natural breathing took place. Last December I was called about half past three one afternoon to see a baby, said to be dying. On my arrival about half an hour later, I was told that the child, a boy six days old, had been dead for at least three quarters of an hour. I found out from the nurse that during the previous night the child had been restless, and that she had given it 2 or 3 drops of Magendie's solution of morphine, which the mother was using for after pains, and that she was afraid to tell anyone of it, until I got the history from her. I examined the baby, and found its extremities cold and

blue, no respiration or heart beat to be detected. Having with me a common portable McIntosh faradic battery, I applied one pole over origin of phrenic nerve, the other over diaphragmatic region, while having the extremities wrapped in warm flannels. After about ten minutes application of electricity and artificial respiration, a feeble gasping inspiration was noticed, and shortly after the heart's beat could be detected. This occurred at about a quarter past four o'clock. The heart's beat continued to grow stronger, but respiration only took place when battery was applied. Directing the nurse to continue intermittent applications of the battery at regular intervals, to imitate natural respiration, I left, intending to return soon and give a hypodermatic injection of atropine as an antidote; being unexpectedly detained, I did not see the patient again until next morning, and was glad to find him breathing well, though much exhausted. From the nurse's account of the night, I got the history that the baby did not attempt to breathe naturally until five o'clock in the morning. Many times she suspended the use of the electricity, but no attempt at respiration was made; the application of the battery poles always elicited an inspiration. At five o'clock natural respiration began, soon he was able to swallow a few drops of strong coffee, and from this on, improved rapidly. Recovery was complete, and baby is now healthy. Success in such cases encourages one to continue efforts at resuscitation for a long time in cases of suspended animation from narcotic poisoning, asphyxia, etc.

Two drops of Magendies solution represents $\frac{1}{15}$ of a grain of morphine; this is the smallest possible amount that was given in this case, and it is probable the dose was larger. The only remedial agent used was faradic electricity, and the application of this was required for more than thirteen consecutive hours, during which time no effort at natural breathing was made by the child

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A GENEROUS DONATION.—Some one, who wishes his name to be unknown, has signified his intention to give a half million dollars to found a convalescents' home, to be connected with the general hospitals of London.

Book Notices.

A Text-book of Animal Physiology, with introductory chapters on General Biology, and a full treatment of Reproduction. For students of Human and Comparative (veterinary) Medicine, and of General Biology. By Wesley Mills, M.A., M.D., L.R.C.P. (Eng.), Professor of Physiology in McGill University, and the Veterinary College, Montreal. New York: D. Appleton & Co.

This book will be of undoubted value to the student of physiology. The writer has devoted special attention to the comparative side of the subject, and this is the book's distinctive characteristic. We must not, however, lose sight of the fact that the study of physiology is always of necessity comparative, and is so presented to us in all the best text-books on the subject. The work will be of great use to the veterinary student, who will find in it a useful text-book which is very comprehensive, and yet not too elaborate in detail. The student of human physiology may with advantage add this book to his library; it will not, however, supplant such text-books as Foster or McKendrick. The writer displays much originality, and the book is written in an interesting manner, while the author's meaning is stated with clearness; the illustrations are numerous and are well executed.

The manner in which the coagulation of the blood is discussed is not as satisfactory as we would wish. The phenomena presented in the clotting of blood have been studied very minutely by many observers, and most important facts have been discovered. The action of a fibrin-ferment on fibrinogen in the production of fibrin has been considered as proven by the majority of physiologists. The part played by the white corpuscles, or the hæmatoblasts, or the influence exerted by the condition of the vessel wall in precipitating the process of coagulation, are questions which demand further investigation. The author of "Animal Physiology" deprecates the amount of work, with so little profit, which has been expended in this field of research, and, while he is inclined to ignore the important discoveries which have already been made in investigating this difficult subject, he suggests no alternative theory, and offers no satisfactory explanation of the phenomena.

The subject is beset with many difficulties; the

fact that it is impossible to study the exact nature of the blood within the living blood vessels is an obstacle in the way of our investigations ; the importance of the subject, however, cannot be over-estimated ; we know part of the truth, but further investigation is demanded.

A Compend of Human Physiology. By Albert P. Brubaker, A.M., M.D., Demonstrator of Physiology in the Jefferson Medical College, etc. Fifth Edition, Revised and Enlarged. Philadelphia : P. Blakiston, Son & Co.

The series of "quiz compends" has become widely known. The fact that a fifth edition of this little volume has been called for, indicates that it has been of service in the past, and its popularity will no doubt be maintained.

Annual of the Universal Medical Sciences. A Yearly Report of the Progress of the General Sanitary Sciences throughout the world. Edited by Charles E. Sajous, M.D., lecturer on Laryngology and Rhinology in Jefferson Medical College, Philadelphia, and seventy associate editors. Issue of 1889, Volumes iii. and iv. F. A. Davis, Philadelphia, New York and London.

These valuable publications, which appear annually, prove of great service to the practitioner who wishes to keep abreast of the medical literature of the day. We know of no work which affords as much reliable information in such a concise and readily accessible form. The contents of volume iii. are devoted to surgery ; the first article is an important contribution by Professor Senn, of Milwaukee, on the surgery of the brain and nerves. In the section devoted to antiseptics we find no reference to the introduction of the double cyanide of mercury and zinc as a new antiseptic ; the value of this substance was brought to the notice of the profession by Sir Joseph Lister in an address published in the *Lancet*, 1889, Vol. ii., p. 943.

Volume iv. contains a very complete account of the contributions to our knowledge in diseases of the skin and syphilis, and diseases of the eye, ear, nose, pharynx and larynx. Sections are also devoted to legal medicine ; examination for life insurance ; diseases of the blood and spleen ; and diseases of the thyroid gland. The last article in the volume is a useful contribution on the subject of urinalysis by Professor Tyson and Dr. Allen J. Smith.

The publishers of these volumes deserve credit for the manner in which they have done their work, the volumes are neat, well printed, and copiously illustrated. The vast amount of information contained in them will be of great value to the medical practitioner.

Personal.

DR. H. NEWELL MARTIN, of Johns Hopkins University, has been elected President of the American Society of Naturalists.

MISS GORDON, a graduate of the Toronto General Hospital Training School for Nurses, has been appointed matron of the Belleville hospital.

DR. T. P. WEIR, (Tor., 1888), has been appointed an assistant physician in the Toronto Asylum for the Insane, in the place of Dr. Cane, who resigned.

Births, Marriages and Deaths.

BIRTHS.

WRIGHT.—At 279 Sparks street, Ottawa, on Friday, the 27th of February, inst., the wife of Dr. Henry P. Wright, of a daughter.

DEATHS.

MOORE.—On Thursday, February 6th, 1890, at the residence of his father-in-law, R. S. Williams, Esq., corner of Wellesley and Sherbourne streets, Wm. Moore, M.D., in the 33rd year of his age.

Dr. Gordon W. A. Ross, of Embro, died Feb. 5th, from congestion of the lungs, resulting from an attack of influenza.

WE regret that through some misunderstanding between our proofreaders and the compositors, certain articles in our last issue appeared in a form not the most intelligible.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - - THE J. E. BRYANT COMPANY, LIMITED, 58 Bay Street.

TORONTO, MARCH 1, 1890.

Original Communications.

A CASE OF LEFT LUMBAR COLOTOMY IN A PATIENT SUFFERING FROM CANCER OF THE UTERUS AND RECTUM.

BY GEORGE A. PETERS, M.B.,

Surgeon to the Out-Patient Department, Toronto General Hospital; Surgeon to the Toronto Hospital for Sick Children.

Mrs. G., aged 67 years; came under my care on Oct. 27th, 1887, suffering from malignant disease of the uterus and rectum. There was no trace of cancer in her family so far as known, and her family history was also good in other respects. She had borne one still-born and nine living children, some of her labors being very severe. The menopause occurred at the age of 50 years, and was accompanied by a profuse and offensive discharge from the uterus, which lasted more or less continuously for four years, but afterwards ceased entirely. She first noticed trouble in defæcating about seven years before date. This condition gradually became aggravated, and for 2½ years she had never had a free motion. The fæces collected in the rectum just above the anus, and though she suffered from great and prolonged tenesmus, nothing could be passed by natural efforts, and she was accustomed to remove the mass at intervals of 3 or 4 days by the aid of the fingers. During all this time she had never noticed any blood, but there was at times a great deal of mucus covering the fæces. Progressive emaciation had been observed for about twelve months. Sudden jarring of the body, as in riding over rough streets, caused a deal of pelvic pain.

Oct. 20, 1887. This morning before breakfast she took one ounce of castor oil, which set up most violent colicky pains and extreme tenesmus, but no motion whatever. When I called in the evening I found her suffering great pain, with almost constant tenesmus. On examination, per vaginam, a hard tumor, about the size of an orange, was found attached to the posterior wall of the uterus near the fundus. The cervix uteri was deeply lacerated on the left side, but quite soft and free from ulceration. The finger in the rectum came in contact with the swelling in Douglas' pouch, and also with a hard nodular mass which involved the mucous membrane of the rectum in the whole of its circumference. The finger could be passed for a short distance through the centre of this mass in the axis of the bowel, but the opening then narrowed till it would not admit the finger tip. Slight pressure produced a good deal of pain. The whole mass had been jammed down into the pelvis by the violent straining efforts, and was quite immovable. No part of the tumor could be felt above the pubes, owing to the distension of the abdomen and the pain produced by deep pressure.

An enema of soapsuds brought away a little mucus and a few small masses of fæces, but it was found impossible to pass even a No. 10 gum elastic catheter through the stricture, so that the enema was practically ineffective.

Ordered an opiate and poultices to the hypogastrium.

21st. The opiate having controlled the tenesmus, the mass in the pelvis gradually passed upwards, so that in the morning, when I saw her with Dr. L. MacFarlane, the mass in the rectum could scarcely be felt. There was considerable localized peritonitis, however, and some vomiting.

22nd to 30th. The temperature ranged during this time from 99° to 101°; pulse 90 to 100. The peritonitis continued, but gradually subsided. During this period neither flatus nor fæces passed per anum, but a great deal of flatus was belched from the stomach, and there was also considerable vomiting, which could, however, be controlled by bismuth and cerium. Morphia was given freely to subdue the pain. Enemata were tried several times, but utterly failed. No purgatives were given by the mouth.

31st. The peritonitis is better, but there is great distension of the abdomen with flatus and fæces, and much pain from persistent peristalsis.

Dr. I. H. Cameron saw her in consultation and agreed with the diagnosis of cancer of the body of the uterus, involving the rectum secondarily.

Nov. 2nd. Assisted by Drs. Cameron, J. Caven and McPhedran, I performed Amussat's operation of left lumbar colotomy. An incision about 4 inches long was made in the left lumbar region, half-way between the crest of the ilium and the last rib. The incision was made parallel with the crest, with its middle point ½ inch behind the middle of that landmark, as recommended by Allingham. The abdominal wall was very thin, and the descending colon was found without difficulty. The bowel was seized at the point where it was uncovered by peritoneum, and drawn well up into the wound. Two strong silk ligatures, about ½ inch apart, were then passed through the skin of one side of the wound, then, missing the muscular walls of the abdomen, through the bowel, being made to include about ¾ inch in a longitudinal direction, and out through the skin of the opposite side of the wound. An incision about ¾ of an inch long was then made in the bowel between these sutures. Through this opening considerable flatus and a small quantity of fæces escaped. The sutures were then drawn through the openings by the loop presenting on the inner wall of the bowel, and divided, thus forming four sutures connecting the bowel with the skin. Six additional sutures were inserted in the circumference of the opening, the wound thoroughly cleansed with sol. hydrarg. bichlor., 1-2000; and the skin of the primary incision stitched up as closely as possible to the point of attachment of the bowel. The wound was then dressed with iodoform-gauze.

Nov. 3rd. Temperature 99⅘; pulse 96. A good deal of nausea from the ether. Little or no pain. Large quantities of fæces and flatus passed by the artificial anus. It was found that a pad placed firmly over the opening caused pain from tympanites, so the wound was lightly covered and smeared freely with an ointment of bismuth, zinc ox. and iodoform.

Nov. 7. Large quantities of fæces continued to pass for some four days. The skin wound healed throughout by first intention, and the attachment of the bowel to the skin granulated rapidly without the formation of any pus.

Nov. 12. (Ten days after operation.) Patient was up for ½ hour. The wound is perfectly healed. The mucous membrane pouts a little when the bowels move. The appetite is good and the patient suffers no pain.

The remainder of the history is quite uneventful. The artificial anus gave no trouble, but it was found best to keep the motion soft with pulv. glycyrrhiz. co.

Towards the last the tumor grew rapidly and she suffered from its pressure effects, viz., œdema and neuralgia of the lower extremities.

She died on May 31st, about seven months after the operation.

A SYMPOSIUM IN EDUCATIONAL REFORM.

BY DRS. MULLIN, TEMPLE, WM. BURT, R. W. POWELL, ECCLES, OSLER, F. J. SHEPHERD, AND M'PHEDRAN.

We have copied a method adopted by the *Philadelphia Medical News*, in publishing the views of a number of prominent members of the profession in the form of a "symposium." The symposium which appeared in the *News* had for its text the co-education and the higher education of women. The subject we have

chosen is that of Educational Reform, practically as it pertains to Ontario. We have asked a number of physicians, repre enting both the medical schools and outside profession, for replies to a series of questions which will be found below. We have to return our thanks for their kindness and promptness in responding.

QUESTIONS.

1. Do you consider that the Ontario Medical Council requires from students an attendance on too many didactic lectures?

2. If the number of didactic lectures be deemed excessive, what effect will such excess have on the work of the students in the laboratories and hospitals?

3. Do you think that Medical Examinations, as at present conducted by the Ontario Medical Council, are sufficiently practical?

4. Do you consider that the examiners in primary branches should be selected from men who have never taught these branches?

ANSWERS.

Dr. John A. Mullin:

I have time to say only a word or two on the questions you put. I have always thought it was unfortunate that students, whether at primary or final, should be examined by any except those engaged in teaching, for I think there are very few general practitioners who are capable of giving the examination that will test the acquirements of the student. This was the opinion of Dr. Rolph, expressed when the incorporation of the profession was mooted many years ago—formed from what he had seen of the examinations at the old Medical Board—and I think there have been many cases since to illustrate the force of his remarks, where medical men engaged in general practice would be obliged to "read up" on various subjects before entering on their duties as examiners. I think that it might be possible to arrange for some system under which the teachers in the several schools might conduct the examinations—or a committee composed of representatives of the several schools might prepare the questions and conduct the examinations. Of course, one difficulty would be to maintain secrecy as to questions and subjects, but it would not seem impossible to provide for this, and also to provide against undue favoritism to their own pupils. I think it ought to be attempted, for the plan of appointing examiners from the general profession will never do justice.

I have several times refused to take part in examinations on the grounds I have mentioned. If, however, the present system is objectionable as regards the Medical Council, is it not equally so as regards the examiners in the University of Toronto? The matter is a very difficult one to deal with, and I feel that it is a subject that ought to be dealt with by those engaged in teaching, and I feel that any views I have are too crude, and not worth anything.

Dr. J. Algernon Temple, Trinity Medical College:

In reply to your circular letter of the 3rd inst., I would say in reply.

1. No.

3. *Re* Medical Council Examinations. I do not think they are sufficiently practical.

4. Primary Branches Examiners. I think the student is done a great injustice by appointing examiners, in these branches, who are not teachers, and who are not constantly engaged in the daily study of them, especially in such branches as Physiology and Chemistry. How many men, in general practice, are qualified to examine in these branches? The present examiner in Physiology is a notable instance of a mistaken appointment.

Toronto, Feb. 20th, 1890.

Dr. Wm. Burt:

1. Yes.

2. The students cannot give sufficient time to requisite work in the laboratories and hospitals.

3. I have had frequent opportunities of observing the Medical and Surgical Anatomy examinations, and I know them to be most practical. I have endeavored to make my own examinations as practical as possible, and the prevailing answer that I got from students, when pressed for a solution of some easy practical question, was that their opportunities for practical work were not sufficient. So far as I have looked into the matter, the endeavor has been to make all the examinations as practical as possible.

4. As a rule, they should not be. Some Surgeons do not allow their Descriptive Anatomy to leave them by constant reviewing

and occasional dissections, and for examining purposes they would require to review their subject, a work which all teachers of Anatomy are required to do as well.

As to Physiology and Histology, although many are well read in these subjects, still so much of them are experimental and laboratory work that very few, other than teachers, could devote the necessary time to them.

Paris, Feb. 6th, 1890.

Dr. R. W. Powell:

1. Yes. It seems to me that the teaching bodies are best qualified to determine the best mode of instilling information, and, in their own interests, they are likely to keep pace with enlightened systems of teaching; and in my opinion, it is not a part of the duty of the Ontario Medical Council to insist absolutely on a fixed number of lectures in the six months' course, viz., 100.

2. If, from the nature of the rules insisted upon by the Ontario Medical Council, the teaching bodies have, in spite of themselves, to adopt a didactic plan of teaching, then six months becomes too short a time to include laboratory and hospital work with 100 didactic lectures.

3. So far as I am aware, the examinations are well conducted and sufficiently rigid to protect the profession.

4. The present mode of selecting examiners is no doubt open to question; it has long been my opinion that examiners in the primary branches ought to be selected for their peculiar aptitude in that branch, or for special qualifications, and for no other reasons.

Because a man teaches a special subject year after year he is, in consequence, the more familiar with it, and it cannot be successfully urged that teaching disqualifies a man to examine.

Ottawa, Feb. 9, 1890.

Dr. F. R. Eccles, London Medical College:

1. I do.

2. You can't have your cake and eat your cake. If a student spends his time taking a second course of didactic lectures, he cuts short his hospital work. I hope all the schools will fall in with the idea of only compelling students to take one course of didactic lectures.

3. I do not.

4. I do not.

London, Feb. 6, 1890.

Dr. W. Osler, the Johns Hopkins Hospital:

We have not received a direct reply from Dr. Osler, but take the following extract from a letter that appeared last month in the *Montreal Medical Journal*: "I do not think the Boards are elevating the standard of medicine in demanding so many lectures, but it must not be forgotten that the schools have, until recently, been wedded to the old plan. I do not know a Canadian faculty in which five years ago it would have been possible to carry out a scheme of graded education. In how many is it possible to-day? Now that a four years' curriculum is the rule, and the option of a year with the physician is no longer allowed, the Board and Colleges could easily unite on a scheme of instruction on advanced modern lines. The teaching in each year should be separate, courses of lectures should not be repeated, and laboratory and tutorial work should take the place of much of the didactic teaching. To carry out this plan effectively, the fees would have to be increased in order to pay for additional instructors."

Baltimore, Jan. 2, 1890.

Dr. Francis J. Shepherd, McGill Medical College:

Your questions treat of subjects of vital importance to modern medical education, and I have much pleasure in replying to them.

1 and 2. I am certainly of opinion that all the Boards (not only Ontario) require about twice as much attendance on didactic lectures as is necessary for the good of the student. A short time ago the British Medical Council complained that the Scotch Universities over-lectured their medical students; what would they say to our Boards, which require attendance on nearly double the number of lectures demanded by the Scotch Universities? Why, our students have to attend over (2,000) two thousand lectures; this means a daily attendance of five lectures for four years, thus leaving but a small portion of time

for work in Hospitals, Laboratories and Dissecting-Rooms. The mental and physical exhaustion caused by attendance on lectures is, to my personal knowledge, very great. How many ordinary people, think you, could stand five daily sermons, each an hour long? Why, a forty-minute sermon once a week exhausts many people. Lectures were well enough when books were dear and there were no facilities for practical work, but now that text-books on every subject are within the reach of all, and Laboratories, etc., are holding out their arms for students, the great necessity for a double course of lectures on nearly every subject is not so evident. Lectures, when given, should be demonstrative and explanatory, and not read slowly from manuscript, so that the student may easily take down all those words of wisdom for future use at examinations. I have always held that if it is so necessary for students to actually write down all the lectures dictated to them, then shorthand should be one of the compulsory subjects in the matriculati n examination.

One course in practice of Medicine and practice of Surgery should be sufficient. It is a question whether Botany is now essential to a complete medical education, and surely one three months' course each is sufficient for medical jurisprudence and midwifery. The more lectures a student attends, the less time he will have for practical work, and the less energy he can put into this work.

3. I am not sufficiently acquainted with the Ontario Medical Examinations to offer an opinion.

4. The examiners for the primary branches should certainly be selected from men engaged in the active work of teaching these branches, and who are in touch with the science of the day. I am also of opinion that medical politics should have nothing to do with the appointment of examiners, but that the best men should be got, irrespective of their politics, school, or province. If teachers find it difficult to keep ahead of the science of the day by working at the subject the whole year, how is it possible that the general practitioner should fit himself for the post of examiner in the few days or weeks immediately preceding the examination?

Montreal, Feb. 6, 1890.

Dr. A. McPhedran, University of Toronto:

1. I do. The didactic lectures, honestly attended and utilized, would require more labor that any student can endure. They do not furnish either an easy, or an efficient, means of acquiring a knowledge of medicine, therefore all good students attend as few purely didactic lectures as possible, and devote all the time thus gained to other means of getting up their work. I speak from a knowledge of many of the best students in both the schools in this city.

2. In proportion as they attend this "treadmill" of didactic lectures, in that proportion must they, of necessity, neglect their hospital and laboratory work; and, as the examinations are fashioned on the basis of didactic teaching, the average student is compelled to attend the lectures, or similar means of getting up his work, in order to pass them, and, consequently, is able to do his practical work in only the most perfunctory manner.

3. Far from it. Take, for example, the examination in clinical medicine. It consists, I believe, in requiring each student to look at a few simple specimens under the microscope and tell what they are, and to answer a few general questions about a patient whom he is asked to examine, and on whom he has, perhaps, had several clinical demonstrations. This, I understand, is the sum total of his practical examination in medicine. He is not required to know anything about gross specimens; he may not know an inflamed lung from a liver, an atheromatous aorta from an ulcerated bowel, yet, when licensed, he is supposed to be able to perform a *post mortem* examination, and swear to the exact state of each organ in the body.

4. To be an efficient examiner in any subject, implies not only an intimate knowledge of the subject, but also of the capabilities of those to be examined. The former can be acquired by study, which must be constant and carried on, in the primary branches of medicine, with full laboratory facilities; the latter can be acquired only by the teacher or fellow-student who is brought into daily contact with students. No one will find fault with these premises; the inference is self-evident. Only a teacher of physiology, for example, can be expected to conduct an examination in that subject so as to ascertain the proficiency of each student in it;

and to test the student's knowledge is the object of an examination.

Toronto, Feb. 24, 1890.

Selections.

THE IMPLANTATION OF DECALCIFIED BONE.

Dr. Senn is so well known as one of the most original observers among American surgeons that anything coming from his pen is looked at with interest. In a paper in the *American Journal of the Medical Sciences*, he discusses the best means of closing large bone cavities, and gives a series of experiments in animals upon the process of repair after implantation of decalcified bone. Something has already been done in attempting to close large cavities in bone after operation. Neubahr adopted the principle of folding in the skin and soft parts, Lesser that of encouraging the formation of aseptic blood-clot, Hamilton that of supplying a nidus for new growth by sponge. Schede proposed a modification of Lesser's plan by the formation of a blood-clot under a moist blood crust, and this method has perhaps met with most favour. In all of these the implanted substance probably acts as a framework in which development of the bone can extend from the walls of the cavity, and Dr. Senn considers it worth while to inquire whether decalcified and aseptic bone would not prove a more natural and useful packing for such purpose. Dogs of various ages were submitted to experiment—first with a view to determine the usefulness of this implantation after trephining the skull, then in cavities formed in the long bones. After injury or operation on the skull, he considers it can be relied on as a measure well calculated to favour the reparative process, and to provide a firm, thick, unyielding cicatrix. After the experimental formation of bone cavities, it was found that the ossification proceeded consistently from the surface to the centre of the cavity, and without the implantation acting as a foreign body. He therefore extends his observations to the human subject, and details ten cases in which he has used the decalcified bone for packing a bone cavity produced by disease, and scooped out and disinfected before being packed. These cavities were of various sizes up to that of a pigeon's egg, and were filled with plates of decalcified ox-bone, which had been rendered aseptic by sublimate and by iodoform. The time occupied by the process of solidification was about one to two months, but the results were certainly better than are usually obtained. Care was taken to ensure capillary drainage by means of some absorbable threads, and when the bony implants had been forced into the cavities, it was maintained that any infiltration by blood between the fragments acted beneficially as a cement. The author concludes "that the packing answers the purpose of an antiseptic tampon, and furnishes the best medium for the growth and development of the tissue resulting from the regenerative process initiated by the trauma." One of the cases narrated was not uncommon, one of excision of the knee with tuberculous deposits on the head of the tibia, which were scooped out and a cavity the size of a walnut left, which was packed with the bone chips. There was firm bony union in two months, with complete healing of the wound.

In a case of united fracture of the humerus, when the conditions, owing to crush of the parts and considerable nerve injury, were unpromising, an attempt to substitute bone grafts has been made by Dr. White, the Professor of Clinical Surgery at the University of Pennsylvania. Union had not taken place either primarily, or after scraping the ends and wiring, so that the recent experience of Mr. McGill, of Leeds, and of Dr. Sherman, of San Francisco, of the success of animal bone grafts, induced him to make the attempt. After scraping the ends of the bones, they were brought nearly together; but a number of fragments of dog's femur, which had been taken under careful antiseptic precautions, and mixed with pieces as large as peas, were placed between the ends of the broken humerus, the wound closed, and a few strands of catgut laid in for drainage. The arm was fixed on a plaster bandage, which was renewed after some time, but how long it remained before a second plaster splint was put on is not clear. Two months later this was taken off, and no union had occurred, so the limb was amputated. The usual atrophy of the bones was found, and there had been no septic

changes, nor was there any evidence of the implanted fragments having been a source of irritation. But there was a new formation of bone, apparently in the position occupied by some of the implanted fragments, and this new spur was connected with the lower fragment, and grew in the direction of the axis of the limb. It appeared, therefore, to show a formative effort which, under more favourable circumstances, might have given the case a successful termination.

In connection with this summary of Dr. Senn's results, it is well to refer to the antecedent experiments, clinical observations and achievements of Dr. Macewen, of Glasgow. At the British Medical Association meeting held in Glasgow in 1888, that eminent and original surgeon showed at one of his demonstrations, given in the Royal Infirmary, a series of cases in which cavities in large bones had been treated in various ways, by sponge-grafting, blood-clot, and introduction of chips of decalcified chicken bone, and also by permitting cavities to heal by being filled up with granulation tissue. All these methods serve the same end. The foreign bodies introduced require to be removed by absorption before the granulation tissue which penetrates them becomes converted into connective tissue. In the case of the sponge, it is least suitable, as it takes very much longer time to be absorbed, and is apt to produce irritation, delaying the healing of the wound. The blood-clot is the most easily absorbed, and its component parts break down into granular *débris*, which is readily removed by the leucocytes.

Decalcified bone occupies a medium position, much nearer, however, to the blood-clot, and its absorption, though occupying a variable time according to methods of decalcification and vitality of the tissues into which it is introduced, is generally effected in about a month. But Dr. Macewen found, taking it as a general rule, that cavities in bone were filled up with granulation tissue almost as quickly and as surely when they were treated with ordinary aseptic dressings, in the form of stuffing, the granulation tissue filling up the apertures, and ossification ultimately taking place. There is one advantage, however, of these bone and blood tampons; they permit healing under a single dressing.

It is a totally different matter, however, when one wishes to introduce viable grafts. Here the tissue introduced grows, there being no absorption and penetration of it by granulation tissue. In one such case, when the condyles of the femur were represented at the time of excision of the knee laterally and posteriorly by a mere shell of bone, the interior of which had been filled by a tuberculous caseating nodule removed at the time of operation, grafts were taken from the patella and placed round the periphery of the cavity as well as in the centre.

The wound healed under a single dressing, and the cavity was found to be filled by a hard substance which felt osseous to the touch, and there was firm osseous ankylosis between the femur and tibia. When an ordinary bone cavity has to be filled, much may be done by osteoplastic flap formation, which affords thoroughly satisfactory results, and is much better than those obtained by filling cavities with absorbable aseptic material.

In compound comminuted fractures, even when several inches of shaft are crushed into fragments, the soft tissues being in fairly good condition, Dr. Macewen does not amputate. The bone fragments are removed, rendered aseptic, and reimplanted, and when suppuration is prevented firm union takes place. This was illustrated by a case of a railway servant, who had been run over by a railway waggon and had sustained a compound comminuted fracture at the lower third of both thighs.

On the right thigh there were two large flesh wounds, the one on the inner, the other on the outer aspect of the limb. These communicated with one another and exposed numerous fragments of comminuted bone scattered among the muscles, the fracture involving three inches of the shaft of the right femur. Some of these fragments were impregnated with dirty grease. The main vessels of the limb were intact. These osseous fragments were removed, carefully inspected, and the greasy matter pared from them by a sharp chisel. They were then rendered aseptic and reintroduced so as to form a continuity with the upper and lower ends of the fractured shaft. The wound healed under one dressing; the man was dismissed with two sound limbs, though with a little stiffness of the right leg, especially at the knee-joint.

To sum up—(1) The healing of osseous cavities is, as a rule, performed by granulation tissue, though this takes a considerable time when the cavity is large. (2) The introduction of aseptic absorbable material, such as blood-clot and decalcified bone, facilitates the healing, especially of the superficial parts of the wound. (3) Osteoplastic flaps are more useful and surer, especially for large cavities. These may be aided by bone grafts when there is a paucity of bone in the neighborhood from which the osteoplastic flaps may form.

VALUE OF THE ELECTRICAL METHODS EMPLOYED FOR THE RESUSCITATION OF PERSONS WHO HAVE CEASED BREATHING.

In patients under ether, the movement of the diaphragm is an exceedingly interesting study, for, before the condition known as surgical anæsthesia is developed, while there is still some rigidity, and the throat reflex is not completely abolished, the contractions of the diaphragm are frequently so violent that unless the laryngeal opening be absolutely free, the intercostal spaces are depressed, and the abdominal contents thrust violently downward and outward. Just so soon, however, as the chin is pulled forward, and a free access of air is allowed, the abdominal displacement is not so great, though it still remains present, and the chest movement is no longer reversed. As the ether is pushed, the respirations become purely thoracic, the diaphragm no longer taking part in the respiratory cycle, or becoming so relaxed that it allows the chest on expansion to aspirate the abdominal viscera upwards, as is shown by the retraction of the belly walls at a time when they should normally expand with the thorax in inspiration. This observation would seem to point to the fact, that the primary stimulant action of ether upon the respiratory apparatus is particularly felt by those centres which govern the movements of the diaphragm, and that, as this is the case, these centres, later on, are the first to feel the paralyzing effect of still larger amounts of the drug.

This gives us, therefore, yet another danger signal during the administration of the ether, and we hold that the integrity of the diaphragmatic function, as represented by the movements of the belly walls, should be as carefully observed as are the thoracic excursions, the character of the pulse, or the condition of the pupil. The rule may, therefore, be laid down that when the diaphragm ceases to act, anæthesia has been carried to its extreme legitimate limit, and that the use of an anæsthetic after this time must be carried on with the greatest care and watchfulness.

We have made other observations, which confirm the belief, that the diaphragm is the first to yield to respiratory paralysis. In death from any cause, the progress of failure of respiration will, in the vast majority of cases, be denoted by a failure on the part of the diaphragm primarily, with compensatory excursions of the chest; and it is also to be noted that as the chest movements fail, the accessory muscles of the neck come into play. These muscles in time cease to act, the hyoidean group lose their *point d'appui*, the chest remains motionless, the lower jaw is dropped, and the scene is closed by a few gasps.

In our experiments made upon animals with coal gas, it was found that this order of muscular involvement was adhered to, and that as the animal returned from death's door, a reversal in the order of return of functional activity was apparent, the neck muscles acting first, the chest muscles next, and the diaphragm last. Whenever this sequence is disturbed, the changes are probably produced by some reflexes which escape attention, and which exert a stimulating effect, particularly upon the diaphragmatic apparatus. Thus, it has been shown that when the communicating fibres from the higher centres to the respiratory centre are cut, so as to set aside any cerebral influence, inspirations may be excited by peripheral stimulations, such as pinching the skin, douching with cold water, or the application of electricity, and that under these circumstances the diaphragm responds more readily than do the other respiratory muscles.

Not only have we found this to be true, but Marckwald has also made a similar observation. In dogs we have found that after respirations had ceased from profound etherization, and where the ordinary methods of resuscitation were unavailing, a rapid exposure of the anterior crural nerve and stimulation of the same by a

strong interrupted current would cause full diaphragmatic movements, soon supplemented by thoracic excursions, after which the animal would continue breathing without any external aid.

By far the most important practical point to be gained from all this information is in regard to the methods commonly used in the application of electricity to persons who have ceased breathing, particularly during the action of an anæsthetic. The few text-books which give any specific directions concerning the practical application of such methods force the physician to a method at once dangerous and impractical, for the directions usually given are to place the positive pole on the phrenic nerve as it crosses the anterior scalene muscle at the root of the neck, the negative pole being pressed against the lower margin of the ribs, and a rapidly interrupted current being used with the purpose of causing contraction of the diaphragm by the direct action of the electricity upon the nerve. Theoretically and practically danger is an ever-present fact under its use. The cardiac inhibitory nerves run so closely to the phrenic fibres, and respond so readily to electrical stimulation, that it is hard to imagine how they can escape stimulation if a current be used of sufficient strength to excite the phrenic nerves near by. By practical experiment we have proved that inhibition of the heart may not only be possibly brought about by this method, but that it is nearly impossible to avoid its production if the phrenics are to be reached at all.

A dog, having had its neck cleanly shaved so as to avoid diffusion of the electrical current, was tied down and anæsthetized, the carotid artery being attached to the manometer in order to determine whether any circulatory change took place. In order to prevent any change in arterial pressure, the result of pain, the animal was kept well under the influence of ether. Two gravity batteries were then connected with a Dubois-Reymond coil, pushed up to 10. The sponge of the negative electrode, well soaked in salt solution, was applied to the lower border of the ribs in the axillary line, and a single point of wire was prepared as the positive electrode, in order that the current might be more readily concentrated upon a given spot. An opening was now made in the middle line of the belly, and the fingers of the left hand thrust in till the vault of the diaphragm could be distinctly felt and its movement noted. On pressing the positive pole into the phrenic region at the root of the neck, forcible unilateral diaphragmatic contractions were excited, together with violent movements of the fore-leg on that side, and it was found that to affect the diaphragm the electrode must be placed on exactly the right spot and pressed in the right direction. The violent contractions produced in the other muscles made it impossible to tell, except by direct palpation, whether or not the diaphragm was acting.

The action under these circumstances on the heart was most striking, for it was found that the only place where the positive pole could be put to contract the diaphragm also *inhibited the heart.*

If a current, by no means as strong as that frequently used in cases of suspended animation, produces such a profound effect upon the heart of a moderately anæsthetized dog, its effect upon a heart already overburdened by congestion or depression would be most disastrous.

Against the reflex excitation of respiration there cannot be the same objection. The electric brush produces a more powerful effect upon the terminal extremities of the sensory nerves than any known method of stimulation. Far more powerful than the douche and than abdominal applications of ether, as recommended by Hare, it should be used under all circumstances when death threatens from respiratory failure. It should not, however, be applied to the neck, but a sponge electrode being placed at the base of the ribs, the brush should be applied at intervals to the epigastrium, to be removed when inspirations result, and reapplied when breathing movements cease. If artificial respiration is being carried on by Sylvester's or other of the recognised mechanical methods, the wire brush should be applied during the inspiratory movements.

It would seem probable that in those cases where the use of electricity has been resorted to, the return to life has been the result of reflex stimulation rather than a direct effect on the phrenic nerves. On the contrary, the striking effect upon the heart suggests the thought that the improper application of electricity may, in

the past, have been an important factor in determining a fatal issue.—*H. A. Hare and E. Martin in University Med. Mag.*, Nov., 1889.

ON THE ANTISEPTIC AFTER-TREATMENT OF VACCINATION.

BY JOHN BARR, M.R.C.S., ENGLAND.

Honorary Surgeon, Stanley Hospital and Hospital for Diseases of the Throat, Liverpool. Public Vaccinator, West Derby Union.

During some five years' experience in a large public vaccination district, with a mixed population of over 100,000, and a yearly average of over 2,000 primary vaccinations, I have noticed that the most common mischief one has to dread is the occasional occurrence of erysipelas, which, of course, as in the case of any ordinary wound, may, under conditions favorable for its development, end fatally through septic absorption.

It is a noteworthy coincidence that all the cases that have come under my observation have been in children in whom cleanliness was almost entirely neglected, or who were living in houses where the hygienic surroundings were bad. There is no doubt that all attacks of blood-poisoning which follow vaccination are due to one or other of these causes, and that they are not the direct result of the operation, as anti-vaccinationists so confidently and unjustifiably assert.

In my practice as surgeon to the general hospital, having been for many years profoundly convinced of the value of antiseptic treatment in surgical affections, I have long felt that the same principle might be employed with advantage to prevent the incidence of erysipelas or blood-poisoning after vaccination. Acting on this idea, I have for over a year employed an antiseptic pad for the protection of the vaccinated arms of infants, applying it after the opening of the vesicle on the eighth day, before which date (in my experience) septic absorption does not take place.

The pad is composed either of boracic or eucalyptus absorbent cotton wool, or of Hartmann's perchloride wood wool wadding (the latter being the most absorbent, and therefore answering best), and covered at the back and edges by antiseptic gauze; two straps of soft half-inch tape fasten the pad to the arm; while a similar tape which passes from its upper border to the opposite axilla, prevents the pad from slipping down. The mother must be warned not to disturb this arrangement for at least six days. I have tried this protective dressing in about 100 cases, some of them specially selected on account of their large inflammatory areola, and have found that on removal of the pad on the sixth or seventh day after its application the inflammatory infiltration has entirely disappeared, and in most cases a firm, hard scab has already replaced the vesicles, so that the arm can safely be left uncovered.

The following are the advantages claimed for this form of protector:

1. It protects the arm from external violence.
2. It absorbs all discharge.
3. Most important of all, it reduces the risk of septic absorption.
4. It cannot be used a second time, like ordinary shields, which it is too often the dangerous practice to use again and again.
5. Lastly, and not its least advantage, is its extreme cheapness.

As the result of the practical experience gained in this matter, my conviction is that this antiseptic absorbent covering effectually minimises the risks of erysipelas and blood-poisoning, those *bêtes noires* of all vaccinators, and is well worthy of a thorough trial.

IODIDE OF POTASSIUM IN HEART DISEASE.—G. See and Lapicque declare that iodide of potassium is especially useful in valvular lesions or in severe myocarditis with weak blood pressure; it quickly increases the heart's force and the blood pressure. Later on, dilating all the arterioles, it aids the passage of the blood through them, and thus enables the heart to recover its contractile power. The iodide should therefore be very valuable in overworked or dilated hearts. The coronary arteries are dilated, and thus not only is the circulation aided, but the nutrition of the heart is increased also. —*Rev. S. C. Méd., January 15, 1890.*

EMBOLISM OF SUPERIOR MESENTERIC ARTERY.—A man of 20, with pain in abdomen, but no rise of pulse or temperature, was treated for colic, which, it was thought, could be traced to a meal of corncake and blackberries. The

pain increased; examination later on in the day showed no tumor or tympanites, but the pain referred to the umbilicus was intense. Manipulation of the abdomen did not increase the pain, nor elicit tenderness. The man in his agony rolled about on the floor. Morphine gave some slight relief. A cathartic was given the second day. Towards evening the pain again increased, the abdomen became very tender, so that the weight of the clothes could not be borne. Nausea and vomiting set in, the body was covered with a clammy sweat, the features were pinched, the eyes sunken, and the prostration great. Death ensued on the morning of the third day. *Post mortem* examination showed peritonitis. Peritoneum and omentum had largely disappeared from suppurative inflammation; no occlusion of bowels. Liver, kidneys and spleen normal. Small intestines intensely hyperæmic, in some places almost gangrenous. Mensenteric glands of small intestine enlarged, and in the mesentery a small dark tumor, which proved to be an embolus in the superior mesenteric artery. No examination of heart.—*J. H. Stubbs, Med. and Surg. Reporter, Feb. 8th, 1890.*

IS THE GASTRIC JUICE A GERMICIDE?—Drs. Straus and Wurtz have conducted a series of experiments in order to ascertain the action of the gastric juice on the bacilli of tubercle, charbon, typhoid, and cholera morbus. The juice from man, dogs and sheep was selected for the experiments. It was found that digestion for a few hours at a temperature of 100° F. destroyed all the germs. The bacillus anthracis was killed in half an hour, the bacillus of typhoid and cholera in under three hours, whilst the bacillus of of tubercle bore digestion for six hours, under which time it was still capable of provoking general tubercular infection. Even when digested for from eight to twelve hours the bacillus was still capable of producing a local tubercular abscess, not followed by general infection. Over twelve hours' digestion destroyed it completely. The germicide influences of gastric juice appears to be due to its acid contents, as it was found that hydrochloric acid alone, dissolved in water in the same proportion as it is in gastric juice, proved as active a destroyer of the bacilli. The pepsin appears to have no influence on the germs. MM. Straus and Wurtz, who publish their researches in *Archives de Médicine Expérimentale*, wisely reminded their readers that the germs, when protected by animal and vegetable tissues and introduced into the stomach in ordinary nutrition, are not exposed to so direct and prolonged action of the acid constituents of gastric juice as in these experiments.

TREATMENT OF ASTHMA.—Of the thous and one things which have been tried for this disease, nothing in my experience is equal to the nitrite of sodium. I am not fond of mixing drugs, and I therefore generally give it alone. In some cases, however, with the object of promoting sleep, I combine it with hyoscyamus, and in others, again, I have found the tincture of lobelia of some additional benefit. When the nitrite of sodium first came into use I gave some large doses (ten to fifteen grains) in a case of uncomplicated asthma, which had occurred in repeated attacks for some years. The first dose made the patient so sick and faint that I could hardly induce her to repeat it; but although the second dose had a similar effect, the patient was freed from her asthmatic attacks completely, and had not had a recurrence when I last saw her, two or three years afterwards. Since then I have given it in from three to five-grain doses, frequently repeated, and always with the greatest benefit. With regard to hyoscyamus in this affection, as well as in other diseases, I find that the ordinary doses are of little benefit. Two drachms of the tincture or of the succus for a single dose should be prescribed, and not less than one drachm when frequently repeated. Besides having an influence over many spasmodic affections, it has a most tranquilising influence on the mind. Given alone in asthma it will not relieve the spasm, but in combination with the nitrite of sodium, the improved condition of the patient is sometimes simply marvellous.—*T. Frederick Pearse, M.D., F.R.C.S., in The Lancet.*

DR. LAUDER BRUNTON AS AN INVESTIGATOR. The return of Dr. Lauder Brunton from India is announced in the *British Medical Journal*, which quotes from the *Pioneer* of India an engaging account of Dr. Brunton during its knowledge of him as a Chloroform Commissioner at

Hyderabad. An accident, which occurred to him in the course of some of his experiments, brought to light the fact that before he went out to India he visited Pasteur at Paris and had himself inoculated, as a precautionary measure against the possibilities incident to a large experimentation upon dogs and other animals. The very danger which he foresaw as possible occurred to him; he was badly bitten by an enraged pariah dog which escaped from the control of his assistants. When every one else present at the experiment manifested alarm, Dr. Brunton quietly reassured them by disclosing the fact of his Pasteurian treatment, saying, "It does not matter; I thought something of this kind might happen." Thus, says the journal, "there is heroism also in a chloroform commission." With all his inflexibility of nerve as a man of science and operator, Dr. Brunton was gracious and accessible even to the inquiries of a stranger, and anxious to explain everything connected with the work of the commission. "No one who has come into contact with him," says the *Pioneer*, "can help being fascinated by the charm of his manner and the extent of his knowledge." Dr. Brunton has since written to the *British Medical Journal* a letter in which he modestly declares that, instead of praise for heroism, he rather deserves censure for "medical awkwardness," and explains that he did not betake himself to Pasteur for inoculation, but was inoculated accidently twelve years ago.—*N. Y. Medical Journal.*

TREATMENT OF HEPATIC JAUNDICE BY HYPODERMIC INJECTION OF PILOCARPINE. By Witkowski (*Nowiny lekarskie*, 1889). The author considers pilocarpine as almost a specific in hepatic jaundice. Two years ago he treated a patient affected with nephritis, complicated with biliary calculus, increase in size and lowering of the liver, jaundice, and ascites of the abdomen and lower limbs. This patient was 44 years of age. Seven years before, during pregnancy, she began to feel pains in the right side. These pains increased after her confinement, and jaundice was associated with them: Carlsbad Priessnitz compresses, and an abdominal bandage with a pad relieved her a little; but the jaundice, as well as the hepatic colic, returned regularly with her menstrual periods. This condition continued, and grew worse for four years. When the author saw the patient, she awakened in him grave fears. After two injections of pilocarpine (half a Pravaz syringeful of a two per cent. solution), the patient experienced considerable relief; the hepatic colic disappeared completely (morphine was useless in the case), and the liver became less painful on pressure. Under the influence of daily injections (about one-sixth of a grain once or twice a day), for three weeks, the jaundice, as well as the hepatic pains, the engorgement and increase in size of liver completely disappeared. That is three years ago, and the patient has had no return since. The author then treated over thirty similar cases, and has always been satisfied with the results. The treatment was ineffectual in cases of jaundice due to hepatic tumors. If in doubtful cases pilocarpine employed for from ten to sixteen days did not cause the jaundice to disappear, the author concluded that he had to deal with malignant disease, and he was never deceived. He recommends the use of pilocarpine in all cases of jaundice, provided always the condition of the heart is not a contra-indication.

Bul. Gen. de Thérapeutique.

G. A.

MEDICAL PRACTITIONERS' MEALS.—Moderation and regularity probably form the concluding words of most of the elaborate directions so often expected by patients and given by their medical attendants. This is the theme which is repeated again and again,, with slight variations; the quantity or the variety of alcohol may be indicated, the use of pickles and heating ingredients deprecated, and the kind of vegetable, cooked or fresh, may give a short respite to the monotony; but the theme is bound to assert itself afresh, and to come in with tremendous force at the close of the oration, so that the patient leaves, humming the refrain, "moderation and regularity," as though the words had never been heard before, and possessed a talismanic power which it had been left for the wisdom of the end of the nineteenth century to disclose. But, joking apart, it may be worth inquiring how far the medical profession furnishes living examples of the truth of the doctrine. Upon general lines all are agreed, even though some may seek to

widen the scope and intention of the words by adding significantly, "In fact, temperance in all things." When the question is pressed more closely, however, it will be found that the rush of work, the exacting demands of patients, and keen competition, do not allow many in general practice to follow out the second half of the lesson. It is more particularly the younger men who suffer from want of regularity, those who fear the consequences of delay when an urgent message has been received. From a health point of view it is sufficiently lamentable to find that they often have not time for their meals, but surely they are acting upon a mistaken notion of their duties to their patients. A tired brain, exhausted from want of food, is not best fitted to cope with the serious problems so often set before it. Surgeons understand the monetary value of moderation and regularity, so that their punctuality in all matters becomes proverbial; but the family medical attendant sometimes seems to consider himself privileged to be a little late, on account of his numerous engagements. Is it too much to hint that, for his own sake as well as for his patients', one engagement, his dinner hour, should be kept with greater regularity? Many practitioners are at work for longer hours than railway signalmen, for whom so much proper sympathy is felt in the event of a catastrophe. If the public could realise that it is unreasonable to expect good advice from a tired and hungry medical man, fewer exacting messages would be sent, to the advantage of all concerned.—*Lancet.*

CHEMISTRY AND ITS RELATION TO MEDICINE.—Among the remarkable developments of medical science in recent years is the important position assigned to chemical discoveries and theories, and their relation to practical medicine. For many years the aphorism of Boerhaave, "Chymia egregia ancilla medicinæ, non alia pejor domina," defined the position chemistry ought to hold in its relationship towards scientific medicine an aphorism which in more recent times has received point and force from the ridicule cast upon chemical theories by the teaching of Graves and Trousseau. Now, however, chemistry promises to play once more a dominant part in the medical theories and speculations of the day, and, under more competent guidance than was possible when the aphorism was originally launched against the iatro-chemists of the seventeenth century, will, it is hoped, avoid the errors of the past, and solve many important problems urgently requiring elucidation. As evidence of this reaction in favor of chemical speculation, we need only point to the chemical investigations being carried on at the present time in physiology, pathology, pharmacology, and in clinical medicine, and to the large sums expended in almost every school on increased laboratory accommodation, to say nothing of the new laboratories constructed on the embankment at great expense by the Conjoint Board of the Royal Colleges of Physicians and Surgeons, and which will shortly be opened for original research. With this resumption of activity in the domain of medical science, the teaching of elementary chemistry assumes an importance not hitherto accorded it. For a sound and efficient training in the principles of both physics and chemistry will be an essential equipment of the student of the future, if he is to understand the facts that chemical research has to put before him throughout his professional career. These remarks have seemed necessary, since there is, we believe, a disposition to relegate the teaching of elementary chemistry to a more inferior position than it even now holds in the medical curriculum. Such a step would be disastrous, and would be utterly retrograde. For if, during the many years that chemistry was but little regarded as an auxiliary to medicine, it formed one of the essential features of our examinations, now that a more extended knowledge of the subject is required for the new departure chemistry has taken as applied to medicine, it would be absurd to reduce the elementary teaching to what a sixth-form boy could pick up during his last half-year at school.—*Lancet.*

THE TREATMENT BY SUSPENSION.—The literature on the treatment of locomotor ataxy and other degenerative diseases of the spinal cord by suspension is already voluminous, and the views held as to the mechanism and the therapeutical value of the treatment are extremely contradictory. The most valuable of the recent contributions to the subject is one by Dr. Cagney on the Mechanism of Suspension, which he read before the Royal Medical and

Chirurgical Society on the 14th of January, and which was discussed last Tuesday evening. It was hinted by Charcot, and assumed by his disciples, that the good effects observed were due to the forcible stretching of the spinal cord and nerve roots. By means of carefully devised experiments and accurate measurements, both on the living body and on the cadaver, Dr. Cagney is able to show that the effect of suspension is to straighten the curves of the spinal column, in this way producing a total shortening of the spinal canal. This is well marked in the cadaver, and is probably greater in the living subject, owing to involuntary muscular contraction. In his inaugural address at the University of Aberdeen, Professor R. W. Reid stated that his measurements had led him to the same conclusion. The effect is most marked in the dorsal curve, where distinct relaxation of the cord can be seen to take place. In the cervical region there is slight stretching of the dura mater, which is probably not sufficient to influence the spinal cord. Whatever good, therefore, has resulted from the treatment cannot be regarded as due to stretching of the cord. Dr. Cagney offers the suggestion that the apparent good effects are due to the breaking-down of adhesions between the fibres, and to the removing of impediments to the circulation, both of which explanations are entirely hypothetical and not altogether probable. Since the effect on the cervical region of the cord is practically *nil*, and suspension from the head is dangerous and inconvenient, he submits that the best results might be expected from suspension from the armpits only, or from suitable gymnastic movements. The main points in the discussion related to the dangers and discomforts of the treatment. Several of the speakers mentioned cases where vomiting and syncope had been set up. This occurs even with healthy persons. One of the speakers who had been suspended by Dr. Cagney for one minute, although in perfect health at the time, experienced great pain, and fainted on being let down, and continued in a fainting condition for an hour. In the carefully recorded series of cases reported by Drs. Taylor and Russell in the *Lancet* of Oct. 19th 1889, epigastric pain, nausea, and syncope were produced by the treatment in several individuals, and they were also apparently the cause of death in a case recorded by Dr. Borsari of Modena. It was observed by Dr. Cagney that the splanchnics could be seen to stretch in the process; and he suggests, with great probability, that it is to this stretching that we must ascribe these accidents. If this be so, however, suspension from the axillæ alone will be as likely to cause them as the combined cervico-axillary method usually employed.—*Lancet.*

Therapeutic Notes.

STROPHANTHUS IN ASTHMA. DR. Drzewiecki has successfully employed strophanthus during the attacks of asthma, m.x. to the dose. He has arrested the attacks for a long time, by giving it at intervals for some time, three times a day. The physiological explanation proposed is that strophanthine lessens the excitability of the vagus. *The Satellite, Jan., 1890.*

DR. OHMAN-DUMESNIL says that by painting powder stains with the following solution they will turn red:

℞.—Amonii biniodidi.
Aquæ distillatæ, aa ℥j. m.

By painting the red marks with dilute hydrochloric acid they will disappear.—*Med. Chips.*

MANY young children are irritable and cry because they have intestinal flatus. Instead of opiates, which are the basis of most soothing syrups, Prof. Bartholow gives the following as a valuable remedy:—

℞.—Misturæ asafœtidæ. f℥j.
Sodii bromid., gr. iij-v.—M.

This is a dose for a child from one to four months old.—*College and Clinical Record.*

EXPECTORANT MIXTURE OF BELLEVUE HOSPITAL.—

℞.—Ammoniæ carb., gr. xxxij.
Extract senegæ fluid,
Extract scillæ fluid, aa f℥j.
Tinct. opii camph., f℥vj.
Aquæ, f℥iv.
Syrup tolu, q. s. ad f℥iv.—M.

Sig. Dose, a teaspoonful. *College and Clinical Record.*

INCOMPATIBILITY OF ANTIPYRIN AND CHLORAL.—Mr. Blainville, a pharmacist of Paris, was called upon to put up a prescription containing sixty grains of antipyrin and seventy-five grains of chloral in half an ounce of water. An oily precipitate was immediately thrown down which resembled neither chloral nor antipyrin in taste, but recalled somewhat that of coriander-seed. A mixture of antipyrin and quinine is also incompatible, both substances being at once precipitated from the solution.—*Medical Record.*

ANTIPYRIN AND SPTS. ÆTHERIS NITROSI.—Knorr says that when an acidulated aqueous solution of antipyrin is brought into contact with potassium nitrite, a feebly soluble crystalline substance of blue green color is formed—iso-nitroso-antipyrin. H. C. Wood has shown this compound to be devoid of any action on dogs or rabbits. These negative results cast a new light on the well-known incompatibility of antipyrin with the nitrites (e.g., spts. ætheris nitrosi), which may be useful to practitioners. The antipyrin seems capable of diminishing, or even wholly neutralizing the possible detrimental action of a nitrite, and on the other hand it is itself debarred from all action by the presence of sufficient nitrite *The Satellite*, Jan., 1890.

APHRODISIAC EFFECTS FROM COCAINE.—C. W. Richardson, M.D., Philadelphia, reports a case of a married lady, modest and reserved, from whom he proposed to remove a growth under cocaine anæsthesia. A few minims of a ten-per-cent. solution were injected. This was followed by erotic excitement, with both facial and verbal expressions, that left no doubt in the mind of the medical attendant and of the lady's companion, as to the impulses which actuated them. It required some time to bring her to even a moderate degree of quietness. An attempt to perform the operation the following day, using the cocaine very sparingly, led to a similar, though not so extreme, condition. No other unpleasant symptoms occurred on either occasion. Surgeons are warned of the development of these symptoms, not only by this case, but by the published observations of Sandré of Vienna, Cunningham of England, and others. Particular attention is called to the medico-legal aspect of the subject. A female friend of the patient should be present whenever it is proposed to operate upon a woman under cocaine anæsthesia.—*Journal American Medical Association.*

UNNA'S TREATMENT OF TINEA TONSURANS.—The hair around the affected area is cut off, not shaved. Then a band of zinc oxide and glue is painted across the forehead, above the ears, and around the back of the neck. Following this, there is spread upon the diseased scalp an ointment of:

Chrysarobin	5 parts.
Salicylic acid	2 "
Ichthyol	5 "
Simple cerate	100 "

A broad strip of gutta percha paper is passed around the head, so that the lower edge adheres to the oxide of zinc glue. This impermeable paper is then painted with glue, covered with a mull bandage, and over the whole is placed a flannel cap. Every twenty-four hours the cap and bandage are removed, the gutta percha paper cut, the scalp cleaned, smeared with fresh ointment, and covered as before. If the ointment finds its way through the dressings, it must be carefully wiped off, and the soiled portions thoroughly painted with oxide of zinc glue. When thus protected, the child may mingle with healthy children without danger of infecting them. In four days the outer dressings are removed, and the ointment replaced by a five per cent. ichthyol salve, which will relieve the superficial irritation caused by the chrysarobin. At the end of the first week, all the dressings may be removed and the scalp washed with oil and soap. The diseased parts are seen to be of a lighter color than the surrounding skin. The entire treatment is to be repeated three or four times.—*Monatshefte für Prak. Dermatologie*, Dec., 1889.

LA GRIPPE ON THE PACIFIC COAST. La Grippe appears to have spread over the whole continent. One correspondent in Victoria, Dr. Wade, says it visited the Pacific coast, and did not spare the Indians. There was a rather high mortality, the deaths being mainly due to pneumonia.

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, MARCH 1, 1890.

ONTARIO MEDICAL COUNCIL.

We understand there are likely to be four election contests for the Medical Council. In Malahide and Tecumseth, two candidates are in the field—Dr. J. MacArthur, of London (who represented the division for a portion of the last term in the place of Dr. Edwards, resigned), and Dr. Sloan, of Blyth. In Burlington and Home, Dr. John A. Mullin, of Hamilton, has been urged by his friends to become a candidate in opposition to Dr. Russell. In Midland and York, the candidates are Drs. Machell and Johnson, of Toronto. In Bathurst and Rideau, Dr. Rogers, of Ottawa, is a candidate in opposition to Dr. Cranston, of Arnprior, the present President of the Council.

UNIVERSITY OF TORONTO MEDICAL SOCIETY LECTURES.

The Medical Society of the University of Toronto has made arrangements to have a short course of lectures, in some scientific subject connected with medicine, delivered every year, such course to be called the "University of Toronto Medical Society Lectures." Similar courses are given in many of the larger cities of the old and new world, and have been found to be productive of much good. We have to congratulate the worthy and indefatigable President, Dr. Ferguson, who first conceived this idea, and the student members of the Society who have worked so zealously in the matter, on the inauguration of such a scheme, and the success that is likely to attend it.

The first series of lectures will be delivered during this month, probably commencing March 12th, by Dr. E. C. Seguin, of New York, the well-known specialist in nervous diseases. The Society is fortunate in obtaining the services of so distinguished a man for its first course. We think it would be well if former students would put in an appearance, and get some definite idea of the admirable work that is being done by this Society. In addition, it will be highly gratifying to the student members if a large number of the graduates were enrolled as life members.

MODERN MEDICAL EDUCATION.

Our readers will, doubtless, be highly interested by a perusal of the various communications published in this issue, on the subject of modern medical education. We have, in the past, frequently commented on the various matters alluded to in these letters, and have endeavored to voice the opinions of the majority of our profession, who are anxious to see this Province keep abreast of the times in respect to all things medical. There are many who differ from us on some points, and their position and standing are such as to command our respect for the opinions they express.

One of the strongest opponents of the double didactic system, Dr. MacDonnell, of McGill, appears to think, as we judge from his opening address of the present session, that the Ontario Medical Council is solely responsible for the present methods of teaching. As a matter of fact, the schools have had such matters pretty much in their own hands, and the "Provincial Board," while honestly trying to raise the standard in many ways, has naturally showed a willingness to allow the schools to carry out the details of teaching according to their own plans. As there is now, however, a difference of opinion between the different medical faculties on these matters, the Council will probably feel called upon to give the whole subject very careful consideration.

It will scarcely be deemed necessary for us to reiterate our views in detail on the present system of teaching. We are more than ever convinced that too many didactic lectures are required, and we are especially opposed to repetitions of purely didactic courses. We agree with Dr. Osler in thinking that "the teaching in each year should be separate, and laboratory

and tutorial work should take the place of the didactic teaching."

We have a high opinion of the methods of conducting the examinations by the Ontario Medical Council. They are highly practical in their character, and are growing more so from year to year. We do not mean to say that they have reached perfection, and we have no idea that the members of the Council have any such opinion. So far as we know, the vast majority of practitioners throughout the Province will agree that there are defects in their methods of choosing their examiners. At the same time, we think that the majority of examiners appointed in recent years have been fully competent for the work assigned to them, and have performed their laborious duties in a way that has given very general satisfaction. Various expressions of opinion on the different points to which we have alluded will be found in the "symposium" which follows.

NOTES.

THE WOMAN'S MEDICAL COLLEGE.—We are pleased to notice the success of the Woman's Medical College of Toronto. A new building for its purposes is in process of erection, and will soon be completed.

A NEW PATHOLOGICAL LABORATORY FOR THE UNIVERSITY OF TORONTO.—An informal meeting of certain members of the teaching staff of the Medical Faculty of the University of Toronto was held on Monday evening, February 17th, when it was decided to organize for the purpose of assisting the pathological section of the science department in the University of Toronto. The following resolution was proposed and carried: Resolved—That whereas in view of the late disastrous conflagration it has become necessary to restore the University buildings, and as an enlargement of the basis of the scientific department is desirable, it is deemed proper to raise a special fund to make provision for the pathological laboratory and instruction in pathology, such fund to be expended by the Senate in such a way as may seem best calculated to further the interests of that subject.

DR. PRICE BROWN, of Toronto, has removed from No. 41 to No. 10 Carlton St.

Meeting of Medical Societies.

THE PATHOLOGICAL SOCIETY OF TORONTO.

January 25th, 1890.

The President, Dr. Reeve, in the chair.

Dr. A. B. Macallum and Dr. John Caven presented their second report on

CARCINOMATOUS GROWTHS.

Malassez and Albarran in the spring of last year gave to the Biological Society of Paris a detailed account of the same structures which were described by Dr. Macallum at the monthly meeting of the Pathological Society last October. Dr. Macallum, when he made that report, was unaware of this, and of the fact that any other observations in the same line had been made on epitheliomata from the human subject.

The observations conducted since last October have yielded a full confirmation of the point then advanced, viz., that all the three classes of structures, intracellular as well as intercellular, are modifications of one another, or are different stages in the life-history of the same organism. These stages in the order of development of the organism are: (1) the spore; (2) the plasmodium; (3) sporulation. The plasmodium may be homogeneous, sometimes vacuolated and granular, and sometimes nucleated with a nucleolar body. Some non-nucleated forms have been seen to possess small irregular chromatin masses, which may be essential parts of its structure, or accidental elements (as swallowed food material). It has been seen fixed in the act of entering epithelial cells, and it has also been very frequently found with pseudopodial projections stretching fo. some distance between the epithelial cells. Their peculiar safranophilous or eosinophilous protoplasm serves to distinguish them in preparations stained with hæmatoxylin and either safranin or eosin The plasmodium, when ready for sporulation has attained a definite size, forms a doubly contoured membrane about itself, and apparently only in this phase of its history acquires a nucleus. This stage may be passed within or without the epithelial cell, although by far most commonly, within. The manner of the segmentation of plasmodium has not been

observed definitely. The number of spores formed is greater than that observed by Albarran, who found only six to eight in two cases of epithelioma of the jaw. In sporulation the protoplasm loses its safranophilous and eosinophilous characters. The spores at first are spherical, measuring about 0.0045 mm., and provided with a central protoplasmatic mass (chromatin ?) stained more or less with hæmatoxylin, and a peripheral unstained zone. These spores change their form, become bilobed or trilobed, and in the latter form are oftenest found between the epithelial cells, where they simulate the nuclei of leucocytes. These spores apparently enter other cells, where they pass a certain part of their life cycle, during which they increase in size, and acquire again their capacity for certain dyes (eosin and safranin.) After attaining a certain size they become free, and this appears to be the condition in which active migration commonly occurs.

The plasmodia were present in the nuclei of the epithelial cells, in one case abundantly, where they presented the characters of the so-called plasmosomata, but they were distinctly seen fixed in the act of passing into or from the nucleus.

The presence of a plasmodium in an epithelial cell deranges the metabolism of the latter, increases its size, and as a consequence of this increase in size, the adjacent epithelial cells are pressed upon and become laminated around the attacked cell, in the form usually known as the "nest."

These bodies, especially the plasmodia, were found in the affected lymphatic glands from a case of epithelioma. The structure and microchemical reactions (*i.e.*, staining power) of these are the same as described for those of the primary growth. The other stages, *i.e.*, the spore and that resulting in sporulation (encysted stage), were not definitely determined in the sections of the lymphatic gland, probably owing to the fact that the preparations were not made with a view to the study of these organisms.

(A full and complete account of these structures, with illustrating figures, will be published shortly).

Discussion.—Dr. Cameron said that the idea of a specific cancer cell had long ago been given up. Cancer cells, in the sense of infected cells, had been detected in their travels along the course of the lymphatics. Jonathan Hutchinson has lately given the weight of his authority against cancerous disease being caused by these organisms. The plasmodium uses up all the elements of the cell for its nourishment. It may be that only in the epithelial cells does it find its proper food.

If the theory prove correct, it will prove valuable by simplifying our knowledge of and aiding in the treatment of the affection.

Dr. J. E. Graham asked what effect this discovery would have on the classification, usually given, of these growths.

Dr. Primrose could not find any evidence of cell division in a slide illustrative of cancer of the liver.

Dr. Macallum said that the absence of evidence of cell division in cancer of the liver tended to show that the growth is added to by infection of the healthy cells, and not by propagation of the infected cells.

Whilst acknowledging the eminence of the authority of Jonathan Hutchinson in all that concerned practical surgery, he did not see why his opinion should in this matter be allowed special weight.

In reply to Dr. Graham, he said he thought that connective tissue escapes, as do all cells which cannot be converted into phagocytes. He did not know whether cartilage cells were attacked.

AN INTRACELLULAR PARASITE IN THE INTESTINE OF NECTURUS LATERALIS.

Dr. A. B. Macallum :

While looking over some preparations of the intestinal epithelium of *Necturus lateralis* to determine if a form allied to Steinhaus's *Caryophagus Salamaudræ* were present, I came across a number of intracellular bodies which were either stained deeply, or not at all, with the staining reagent (alum cochineal) and which I at first considered to be similar to the plasmosomata and nucleo-plasmosomata of Lukjanow (*Arch. fur Anat. and Phys.* 1888) occurring in the intestine of the European Salamander. I had not continued my observations long before I came to the conclusion that many of these forms were parasitic, for the following reasons :

1. They are inter- as well as intra-cellular.

2. They are frequently fixed in the act of migration, when they are found possessed of long processes which extend between the cells.

3. They have been seen fixed in the act of migrating from the nucleus of an epithelial cell after having absorbed all its chromatin.

4. When one cell is found specially affected by them, careful search shows the immediately adjacent epithelial cells to have these bodies in greater or less number. This infection of the adjacent epithelial cells may extend to a distance equal to the thickness of half a dozen epithelial cells.

It is not to be denied that some of the intracellular elements described by Lutjanew are due to cell degeneration. I am inclined to believe that many of them are parasitic elements.

The main peculiarity of this intestinal parasite in *Necturus* is its chromatophagous character. My own observations on the origin of hæmoglobin in *Necturus* allow room for no other conclusion than that the chromatin of the hæmatoblasts is the mother-substance (hæmatogen) of the hæmoglobin. I have also determined, I think definitely, that there is a transmission from the mother to the ovum (in Amphibia) or to the fœtus (in the cat) of this chromatin in but a slightly changed condition. What is more natural then, than to infer that chromatin is an essential constituent of the food of a growing or adult individual, and that when it is withheld, or its resorption by the intestine prevented, the system is thrown into that condition which results in anæmia? Ordinary or simple anæmia is usually regarded clinically as a disease or condition in which only the corpuscles and their hæmoglobin contents are affected, whereas in my opinion the latter condition is secondary, the primary cause of the anæmia being the non-absorption of the chromatins of the food (milk, flesh, etc.) for some reason or other (intestinal fermentation, putrefaction, etc.),—hence the lessened production of that compound derivable from chromatin, (hæmoglobin) as well as the diminished performance of the functions of the various organs of the system.

On the other hand, it may be that progressive pernicious anæmia depends on a greater derangement of the chromatin-absorbing power of the intestine, and the characters of the chromtophagous parasite in the intestine of *Necturus* point to the possibility of the occurrence of a similar parasite in the intestinal tract or in the blood in cases of pernicious anæmia, which absorbs the chromatin, which should go towards recruiting the nuclear elements of the body. The action of arsenic in so-called cases of pernicious anæmia might therefore be attributed to a specific effect on such parasites, if they exist, just as the action of quinine in cases of malaria is attributed to a specific effect on the *Laverania malariæ*. If such parasites do not occur in cases of pernicious anæmia, then we must attribute the action of arsenic in such cases to its facilitating the absorption of chromatin from the food in some way or another

The parasitic nature of the condition known as pernicious anæmia is rendered probable from the fact that in certain localities it is more frequent than in others. For instance, in the canton of Zurich, Biermer observed 15 cases in 5 years (1867-72),all of course ending fatally: an exceptional record, I believe.

In chlorosis we have probably two factors: the diminished absorption of chromatin from the same causes as in ordinary anæmia, and the more or less abundant constant withdrawal from the organs of the patient, during the abnormal condition, of the chromatin to store up in the ovarian cells and in the developing uterine mucosa.

Dr. Graham said that clinical experience had often caused him to think that some cases of pernicious anæmia must be of parasitic origin. The cases which had especially impressed him were those coming on suddenly, a few days after a confinement in which there had been no loss of blood. He used the term in a general way, for of course some would not consider anæmia after confinement really a pernicious anæmia. Can there be any connection between the large number of white blood-cells and parasitism? He had often thought leukæmia, pseudo-leukæmia and pernicious anæmia were closely related.

PECULIAR CASE OF DISEASE OF THE BRAIN.

A. McPhedran:

A. T. æt. 56; enjoyed good health till March, 1888, when appetite became fitful, with occasional attacks of sudden vomiting. He gradu-

ally lost flesh. Towards the end of May he noticed some difficulty in walking, objects "wavered," as they would on shipboard in a stormy sea. In June there was slight paralysis of right side of face, unable to open right eye alone. Partial anæsthesia of lower part of cheek, lower lip and chin on right side. Tongue feels as if scalded, is partially anæsthetic, as is also inner part of left cheek. Taste sweetish and disagreeable, lately becoming more bitter. Frequent pains in occiput, shooting up over vertex, jolting causes pain across shoulders. Bowels constipated: need strong purgatives; formerly easily moved.

Dr. R. A. Reeve found the eyes normal, except slight diplopia, due to paralysis of the superior oblique muscle.

Paralysis of left face developed early in July, being complete by the 10th. Some vertigo on sitting or standing. Diplopia more marked, now unable to read. Walking more difficult. Watch heard at six inches on left, and twenty on right side. Hearing on left side sharpest until last few days, he says. Tragus of left ear, and neighboring parts feel swollen and numb. Sense of taste absent in anterior part of tongue; slow perception at back. Vomiting more frequent; but without nausea, sudden and projectile. Constipation persists. About July 25th, urine suddenly became very copious, over a gallon in twenty-four hours, very pale, sp. gr. 1005. A few days later profuse vomiting set in, lasting a couple of days, during which the urine was reduced to almost normal amount. After the stomach quieted the polyuria returned; in this manner it alternated several times with vomiting, sometimes fully 300 ounces of urine were passed in twenty-four hours. There was great thirst and often a voracious appetite.

In August, the diplopia became more marked, so that he constantly saw objects double, except when they were above the level of the eye.

In September, the hearing in the left ear seemed to be completely lost.

In October, the paralysis of the right side of the face, which had been scarcely perceptible after the left side became paralysed, now increased and became nearly complete. The soft palate and pharynx became paralysed also, so that no food could be taken, and very little drink, for a month before death. During this time the amount of urine passed diminished, until very little in excess of normal. Vomiting occurred occasionally, emaciation became very marked.

Death from asthenia, Oct. 29th, at 5 a.m. *Rigor mortis* complete at 7 a.m.

The discussion was postponed until the next meeting.

TORONTO MEDICAL SOCIETY.

Dr. T. A. Mackenzie narrated a case of

PUERPERAL ECLAMPSIA.

Primipara, aged 26, was, during pregnancy, in a remarkably good state of health, suffering neither from nausea nor constipation, and able to attend to all her household duties. On Christmas Day she had a severe headache, but this was the only one of which any history could be obtained. She noticed that at night there was some slight puffing about the ankles, and that her shoes seemed to pinch her. This swelling, although increasing gradually, was never so great as to cause her to mention it. On New Year's Day, between six and seven in the evening, while she and her husband were examining something, she suddenly found that she could not see. Immediately afterwards she complained of a sensation of numbness of the left side of the face. This spread to the fingers of the right hand, then to the right arm and leg. These primary symptoms were not heeded, when suddenly she was seized with convulsions. I noticed afterwards, when she was in the state of coma, that the movement was almost entirely in the left leg and arm. As it was impossible for me to attend her, she was seen by Dr. Lynd. In all there were 14 convulsions. Chloral given in full doses was useless. The convulsions were partially controlled by the inhalation of chloroform. As soon as the os uteri was found to be sufficiently dilated, the forceps were applied and the child delivered. The next morning there was one slight convulsion; no others occurred. There was no return of consciousness. After the first attack quite a large quantity of urine was passed. The urine drawn off by catheter gave when heated, nearly ⅓, by bulk, of albumen. The microscope showed an abundance of granular casts. Every effort was made to act on the

bowels by the use of p. jalapæ co. glycerine enemata, elaterium, croton oil; but these all failed. Finally on January 3rd an enema of turpentine had the desired effect. Pilocarpin gr. ⅙, repeated in an hour and a half, caused perspiration, but it was not free nor of long duration.

The lungs filled up and death occurred about 48 hours after the first attack.

Dr. Holford Walker said that he had seen four cases of puerperal eclampsia. The first case he had seen was in a woman who had a normal confinement. An hour after he got home from attending her, a message came saying that she was in convulsions. On his way back to see her he remembered that he had read somewhere that heroic doses of morphia was the best treatment. He accordingly gave her 3 grains hypodermically. The result was that shortly after a great quantity of urine, a chamber vessel full and a half, was passed. There were no more convulsions—and the woman recovered perfectly. In his other three cases he had given two grain doses; the convulsions ceased in half an hour; there was an abundant flow of urine and perfect recovery. Personally, he would not hesitate for one moment to use morphia, and in such doses.

Dr. J. F. W. Ross had seen quite a number of cases. In one case the convulsions came on 24 hours after labor. Sixty grains of chloral were given, and no more convulsions. In another everything had been done, even bleeding, and yet death occurred. In a third, in which the attack was ushered in by loss of sight, and vomiting, the patient was kept under ether for eighteen to twenty hours, and recovered. In still another, death occurred, in spite of morphine given in very large doses, although not such heroic doses as those given by Dr. Walker. He would be afraid to use such a dose.

Dr. Acheson related a case of convulsions coming on an hour after delivery—three convulsions in all—treated by half grain doses of morphine. He was inclined to believe that both the morphine treatment, and treatment directed towards eliminating the uræmic poison from the system, were indicated

Dr. Greig had been called to a case in which there had already been two convulsions. He found the patient quiet and sensible. Putting the finger into the vagina to make an examination induced another very severe convulsion. Morphine gr. ½ hypodermically, bromide and chloral gr. xx of each, and the usual purgatives, prevented further convulsions, and a month later the woman had a normal labor.

Dr. Machell did not believe in any hard and fast rule of treatment. A purgative, removing the irritation of a loaded bowel might give relief; so might bromide and chloral; or morphine; and yet often any or all of these fail and death must occur. A woman had been found by her neighbors in an unconscious state. A physician was sent for, who gave her chloroform, applied the forceps and delivered her. No other convulsion occurred and yet the patient died, never gaining consciousness.

THE HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated meeting 4th Feb., 1890.

The President, J. W. Rosebrugh, M.D., in the chair.

Dr. Wm. McCargow read the notes of

DISLOCATION OF THE FOOT BACKWARD.

The subject of this accident, a large stout woman, aged 60, I first saw at Oneida, County of Haldimand, August, 1858, along with Dr. Jacob Baxter, of Cayuga.

She stated that three months ago she received a fall, displacing the ankle joint; that she was treated for it by a medical man in her neighborhood, who failed to reduce the luxation, and left her in her present state. She also stated having consulted other medical advice without benefit.

Upon examination the foot was found to be displaced backwards, with shortening of the foot and lengthening of the heel, with a depression above the latter. The toes are pointed downwards and the extremity of the tibia forms a projection in front of the ankle. I gave her to understand that it might not be too late to remedy the displacement so that she could walk. At this time, the way she went about the house was only by resting the injured limb on a chair, and with the aid of the other and carrying the chair, moved about in that way. Having willingly agreed to an operation, a plaster cast of the limb was taken. On the 7th September, assisted by Dr. Baxter and Mr.

Farrell (subsequently a graduate of Royal College of Kingston), the patient having been duly placed under chloroform, an attempt was first made at reduction by aid of a "Jarvis Adjuster." Not succeeding by what was considered by us as a fair trial, I divided the tendo Achilles, when reduction with the hands was easily effected. The fibula, broken in the usual place in like cases, was ununited.

The chief after-treatment of the case consisted in keeping the end of the tibia in place with due support of the heel and foot, which was done by a well-fitting anterior tin splint with foot piece, such as Dr. Keer of Galt was in the habit of using in simple fractures of the leg near the ankle-joint. She recovered with a stiff joint. Passive motion was advised after the removal of the splint, but insufficiently used by her husband, and the distance from my house in Caledonia being some 16 miles, it was out of my power to attend to it. I saw the patient, Mrs. Wyllie, some years subsequently at the house of her son in London, Canada West, when she was well and had good use of the foot.

This dislocation is very uncommon, which is my only excuse for bringing this case before the Society. The tibia rests in these cases from half an inch to three-quarters of an inch in front of its proper place.

INGERSOLL OLMSTED,
Secretary.

Correspondence.

THE PROSPECTIVE PATHOLOGICAL DEPARTMENT OF THE UNIVERSITY OF TORONTO.

Editor of CANADIAN PRACTITIONER.

DEAR SIR,—There could not be a more fitting time than the present to appeal to the great medical constituency of Ontario in behalf of the necessities of our beloved Provincial University. It is needless to refer to the dire calamity which so recently laid the grand old building in ruins. We must remember, however, that the University still lives, not only in the hearts of her graduates; not only in the teachings of Science and Art, which she has scattered broadcast throughout our land; but likewise in the affections of all men who love the grand old principles and truths upon which she was founded, and by which she has been guided through every step of her career.

The matter of her restoration is one in which all must feel the deepest interest. Our Provincial Parliament, the City Corporation of Toronto, the Senate of the University, with various other corporated bodies, as well as private individuals, will do all they can to help in this direction; but there will yet remain much to be done; and herein lies the opportunity for the medical men of our Province to prove their devotion to that science, to the pursuit of which they have dedicated their lives.

With all the advancement of recent years, pathological research is yet in its infancy. Still the investigations are sufficiently mature to prove that the position which pathology should occupy, in the study of disease, cannot be overestimated; and with the desire of furthering this laudable and utilitarian end, the medical graduates of the University in this city have inaugurated a movement which, they trust and believe, will receive both wide and generous support.

The cost of a well-equipped pathological labaratory will be considerable; and for this, so far in the estimates for restoration, there has been no provision. What the sons of the University would like, and what they will endeavour to accomplish, will be to make this the special work of the graduates in medicine, as a fitting tribute to our national seat of learning, and an honor to our noble profession.

This is an object so thoroughly Provincial, so thoroughly identified with the best interests of our country, that all graduates, of whatever school, might willingly lend it their aid. Trusting that what all University men so earnestly desire may be accomplished,

I am yours, etc.,
PRICE BROWN, M.B.
No. 10 Carlton St., Toronto.

PRESERVE YOUR INSTRUMENTS.—You can preserve your instruments from rusting by immersing them in a solution of carbonate of potash for a few minutes. They will not rust for years, even when exposed to a damp atmosphere.—*Southern Clinic.*

Books and Pamphlets Received.

Annual Report of the Canadian Institute, Session 1888-89, being a part of appendix to the Report of the Minister of Education, Ont.

Transactions of the Medical Association of the State of Missouri, at its 32nd Annual Session, held at Springfield, Mo., May 21st, 1889.

Book Notices.

A Handbook of Dermatology for the use of Students. By A. H. Ohmann-Dumesnil, M.A., M.D., Professor of Dermatology, St Louis College of Physicians and Surgeons, etc.

"This book was not written to fill a long felt want, but rather as a guide to students in their reading." The author has sifted out the wheat from the chaff, and presents, in a concise form, the best and most applicable methods of dealing with the diseases of the skin.

Handbook of Materia Medica, Pharmacy, and Therapeutics, including the Physiological Action of Drugs, and the Special Therapeutics of Disease. Samuel O. Potter, Professor of the Theory and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Second Edition, P. Blakiston, Son & Co., Philadelphia.

The author, already known for his "Quiz Compends" and "Index of Comparative Therapeutics," has compiled a book, which should be of use to the busy practitioner, containing, as it does, a vast amount of accurate and valuable information, arranged in such a form that "he who runs may read."

The American Armamentarium Chirurgicum. New York: George Tiemann & Co., 107 Park Row.

This is a very full and complete illustrated catalogue of surgical instruments. The drawings of the various instruments and appliances in all departments of surgery are exceedingly good. The book, however, is much more than a simple illustrated catalogue. It contains descriptions of the methods to be employed in using the instruments in the various surgical procedures. There is, however, no pretence of originality, as the descriptions referred to are taken from the writings of standard authors. As good judgment has been exercised in choosing the best quotations this portion of the work is all that could be desired. Altogether it is the best book of the kind we have seen.

The Physician himself and Things that concern his Reputation and Success. By D. W. Cathell, M.D., Baltimore, Md. Ninth edition, revised and enlarged. Philadelphia and London: F. A. Davis.

This book contains a large amount of good sound advice which will continue to be of service, more particularly to the young practitioner; the fact that a ninth edition has been called for shows that it has already had a large circulation, and has become widely known. The author has covered a great deal of ground, and almost every conceivable difficulty which may be encountered by the physician, either in his dealings with his patients or in his relation to his professional brethren, is freely discussed, and reliable advice is given as to the proper course to pursue. There are some minor points in which we cannot fully agree with the writer, but there is nothing which we would call objectionable in the book, and as there is a large amount of excellent material presented, we have no hesitation in heartily recommending it to the profession.

The History and Pathology of Vaccination. In two volumes. By Edgar M. Crookshank, M.B., King's College, London. London: H. K. Lewis, Publisher.

In the volumes before us, we have a work of a kind but too seldom seen in the physician's library, at least on this side of the Atlantic. A leading literary light amongst us has said that the medical profession in America should not be reckoned as a learned profession. While this is not altogether true, the very marked lack of information in regard to the history of medicine amongst practitioners lends a certain force to the statement. It is very doubtful if ten men out of a hundred picked at random from the profession in Ontario, could give a correct *résumé* of the information regarding the discovery and introduction of vaccination contained in these volumes. With regard to this work, whilst it is impossible in the space at our disposal to *review* it at all, we can recommend it heartily to the profession as well worthy of perusal, on account of both its historical interest, and its value as a scientific exposition.

Personal.

DR. S. T. RUTHERFORD (Tor., '89) has gone into partnership with Dr. Parke, of Listowel.

DR. JAMES L. TURNBULL (Tor., '89) has recently returned from Europe, and has formed a partnership with Dr. Reeve, of Clinton.

DR. FRANK FERGUSON, pathologist to the New York Hospital, has been elected Professor of Pathology in the New York Post-Graduate Medical School and Hospital.

Dr. ALFRED C. SMITH, of Newcastle, N.B., has been appointed a Governmental Commissioner in Leprosy, and will be expected to give his whole time to the work of making investigations in connection with that disease.

DR. WILLIAM WARREN POTTER, of Buffalo, was elected President of the New York State Medical Society. Dr. Potter belongs to a family of doctors, including his grandfather, father, uncles, and his son, who were or are members of the profession. He took a prominent part as a surgeon in the civil war. He has been for some time one of the editors of the *Buffalo Medical and Surgical Journal.* He was one of the founders of the American Association of Obstetricians and Gynæcologists, of which he is the secretary.

ENTERPRISING CANADIANS.—Drs. Clark & Ewing, lately students of this city, appear to be flourishing in Buffalo, as may be judged from the following, which appears in the *Buffalo Sunday Times:*

A SEVERE CASE OF NASAL CATARRH CURED BY THE FRANKLIN ST. SPECIALISTS.

"I feel so happy and thankful that my daughter Gertie has been so thoroughly and so quickly cured by Drs. Clark & Ewing, of 213 Franklin street," said Mr. Noble, of 426 Seventh street, "that I could not possibly tell all about the case in a testimonial, but if anyone will call at my home, I will gladly explain her condition before and after treatment."

Our specialties are diseases of the heart, lungs, liver, stomach, kidney, nose, throat and skin.

Dr. Clark, B.A., M.C.P.S.O., formerly demonstrator of the chemical laboratory in the medical department of Niagara University.

Dr. Ewing, C.M., M.R.C.S., England, formerly lecturer in pathology and skin diseases in the medical department of Niagara University.

Consultation free. Charges moderate. Office hours, 9 a.m. to 8 p.m. Our only office and residence is 213 Franklin street, Buffalo.

Births, Marriages and Deaths.

BIRTHS.

DUNCAN.—At Chatham, on Wednesday, 19th February, the wife of J. H. Duncan, M.B., of a son.

DEATHS.

DALTON.—On Friday, February 14th, at 6.30 p.m., W. H. Dalton, M.D., aged 75 years, 11 months. Late of Bartlett Place, Davenport road, Toronto.

Miscellaneous.

BILLING'S NATIONAL MEDICAL DICTIONARY.—A review of Billing's Medical Dictionary will appear in our next issue. We have no hesitation in recommending it very highly.

A rather sensational article has been going the rounds of the medical press concerning the danger of contracting consumption in sleeping-cars where the berths have previously been occupied by those afflicted with the disease, and making several absurdly impracticable suggestions in regard to the prevention of the infection. It might be going too far to say that there is no danger at all from such a source, but it is a very small one. There is little proof that the bacillus tuberculosis retains its vitality outside of the body long enough to infect another person under such circumstances. While consumption is probably a *communicable* disease, we can by no means consider it a contagious one in the same sense that the term is applied to small-pox, scarlet fever, or similar diseases.—*Popular Science News.*

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

[illegible] - - DR. J. E. BRYANT COWAN, [illegible]

TORONTO, MARCH 17, 1890.

Original Communications.

TREATMENT OF EPILEPSY—CHOREA.*

BY E. C. SEGUIN, M.D.

Whilst a knowledge of general therapeutics is easily obtained from text-books and didactic lectures, the practitioner must have recourse for information, as to the therapeutics of special diseases, to the medical journals of the day, new works and special lectures. In this field of special therapeutics caution must be exercised, for so much of the knowledge is premature, so much of the material raw, so many of the remedies s mply due to turns of the wheel of fashion. Diligent search should always be made for the unsuccessful cases. Time and repeated tests will settle the status of any new remedy.

In epilepsy, when due to encephalic, peripheral or toxæmic causes, treatment must be directed to the cause of the condition, not to the condition itself. Under the name of idiopathic epilepsy, are included cases in which there is no gross lesion or toxic condition. Such idiopathic cases demand treatment of the condition. It must be remembered, however, that many cases, seemingly idiopathic, are eventually found associated with a gross lesion. This lesion may have been the starting point of the disease, or may have been inter-current. The wife of a physician, who had been declared the subject of idiopathic epilepsy, by such a competent observer as Brown-Sequard, has come under my observation. She had for 10 years, attacks of both grand and *petit mal*. Suddenly the attacks increased in frequency and severity, and death resulted. Autopsy showed a glioma, which, doubtless, had been present since the primary epileptic manifestations; at first growing slowly, and then more rapidly.

Heredity predisposed to epilepsy. Alcoholic excess, sexual excess, and syphilis in the parents, rendered the child more susceptible. Injuries during delivery to the cranium and its contents predisposed. There might be a history of asphyxia at birth, with or without convulsions.

In the patient himself, a weak heart, masturbation or sexual excess, the abuse of alcohol, or any severe acute disease, might excite an attack.

As to infantile eclampsia, the hereditary tendency was an important thing to consider, for epilepsy might or might not date from such infantile convulsions.

Too much importance should not be attached to such supposed causes as defective eyes, disordered digestion, and dysmenorrhœa. These conditions should, of course, be remedied, but one need not expect to cure the epilepsy in this way.

Stevens, of New York, has laid great stress upon eye strain as a cause of epilepsy. Treatment of the eyes, by lessening the irritation, may reduce the sum total of predisposing causes, but will not cure the epilepsy. The report of the Committee of Investigation shows

* Abstract of a lecture delivered before the [illegible] Medical Society.

this clearly. The hope of curing epilepsy by the removal of the ovaries, or the foreskin, is equally chimerical. It is true that some few cases of hystero-epilepsy have been cured by removal of the ovaries, but this should be undertaken, not as a last resort, but only when the diagnosis was most certain. The lesson specially impressed was, to search your patient, and by careful examination discover the seat of irritation, remove, if possible, the cause, and, at the same time, attend to secondary conditions.

Personally, I am a pessimist. I have never reported cases of epilepsy as cured. I have had a patient, after treatment, go without an attack for 11 years, another one for 7, and yet the epilepsy recurred. For a case to be reported as cured, there must not be any convulsion, nor any epileptic manifestation. I must state that I believe ordinary cases of epilepsy can be cured by long continued use of bromides, but such cures are very rare. The treatment in medical cases must be continued for 5 years. In 4th year, dose may be gradually diminished; in 5th year, dose may be discontinued. Surgical cases may be regarded as cured, if there is no recurrence in 2 years. Great skill is needed in finding the right dose; for if the dose be too small, there is no effect; if too large, severe bromism is excited. From one to two months are often needed before the proper dose is ascertained, and during this time the patient must be seen frequently. The capacity to resist bromism varied greatly. In some cases, 30 grains daily produced it, whilst in others, 150 to 250 grains daily had no such effect.

Little children bear much larger proportionate doses than adults, because the drug is more quickly absorbed, and more quickly excreted; 40 to 60 grains daily were needed by a child of 2 years.

The weight of the adult, and the condition of the general health, affects the size of the dose. Feeble heart, disease of arteries, or cardiac organic disease, lessen the resistance to bromides, and hence digitalis is useful in such cases.

Organic cerebral disease increases the susceptibility to bromide.

Unhealthy conditions of the skin, and other excretory organs, demand lessening of the dose. The appearance of acne is no guide as to the size of the dose. This acne may be avoided by the administration of the bromide in alkaline waters, and an occasional dose of arsenic.

It is sometimes objected to the bromide treatment, that it predisposes to dementia and insanity.

This is to be met by the fact that, in former days, before the bromides were used, epilepsy had these same sequels, and indeed it is probable that now there are fewer cases of dementia.

A single bromide, administered in water, not in syrups or bitters, is preferable to any combination of bromides, such as that of Brown-Sequard. Personally, I prefer bromide of sodium, because it is comparatively tasteless, and less apt to disorder digestion.

℞.—Bromide of soda, ℥iss.
Water to, ℥vii.

So that a teaspoonful of the solution represents 15 grains of the salt.

I insist on great dilution—up to 30 grains—I give in a half glass of water, 30—60 grains in a full glass of water. In my experience, gastric irritation has been due to the use of concentrated doses. If it be advisable to use arsenic, belladonna, or digitalis, they should be given separately.

Any ill effects which may result from the bromide can be controlled or avoided by the use of the alkaline waters, such as the artificial vichy, the Buffalo lithia, or the lithia water manufactured by the Hygeia Company of New York, which contains a known quantity of lithia. For poor patients, almost as good effects may be obtained by adding a little bicarbonate of soda to the water, or the bromide may be given in milk.

The chronology of the attacks must be carefully studied, and the time of administration regulated accordingly. As few doses as possible should be given.

Just as quinine is given 4 to 6 hours before the malarial paroxysm, so the bromide before the epileptic fit. In the nocturnal epilepsy occurring between 12 and 2, the drug should be given early in the evening. If the attack comes on about daylight, the patient should be wakened up some hours before and given his

dose. If the attacks are irregular, the doses are given three times a day, as a rule, after meals.

When there seems to be a special predisposition to attacks at the menstrual period, the dose should be increased for the 4 or 6 days of danger. The dose should be increased as children grow older and larger, as puberty approaches, and when the patient is about to be exposed to unusual excitement or fatigue, such as theatres, balls, concerts, or railroad journeys.

The dose may be reduced after 3 years, if the patient continues well. I am accustomed to lessen it by 7½ grains every 3 months. During the autumn and winter, the dose should be increased; in summer, decreased.

During temporary ill health, *e.g.*, colds, diarrhœa, etc., the dose may be decreased, but never omitted entirely. In very severe illnesses it may be discontinued.

I insist on the medicine being given by some other person than the patient himself, thus making some one else responsible, for the peculiar mental condition of the patient may cause him to forget it altogether, or he may take an extra dose.

As a rule, it is better to tell the patient that he has epilepsy, especially in cases between 16 and 30 years of age, because no engagement of marriage should be entered into.

I always leave written directions, especially when patient is not under constant observation.

Can anything be substituted for bromide? I believe that chloral hydrate may be combined with, or may be substituted for it. I have had better success, however, with a combination of them. There is a severe confluent form of acne, affecting the legs especially, and producing deep ulcers, which cannot be got rid of unless the bromide be discontinued, and then chloral may be substituted. Unusual debility and mental dulness, mania, are indications for chloral. Rarely chloral causes ocular irritation.

In chorea, arsenic is the standard remedy, given in 10 to 15 minims of Fowler's solution after meals. This will produce symptoms of arsenical poisoning, and force you to discontinue it for some days. When the drug is recommenced, it should be with the dose at which it was discontinued. This point I wish to specially emphasize, for I believe that many cases of unsuccessful treatment are due to the error of recommencing with the original dose. The dose may then be increased up to 30 minims. It is peculiar that after the arsenic is thus recommenced, symptoms of arsenicism do not recur. I would also lay stress upon the free dilution of the arsenic. It need not be taken at one draught, but may be sipped during the hour after the meal.

But once have I seen a herpes result from its administration. From time to time the urine should be examined for casts.

Rest, absolute rest, in bed is essential. The child should be put in a room by himself, and the other children kept out. But one adult at a time should be allowed into the room. The child should be kept recumbent in bed and should not be allowed to have toys, pictures, or books, and should not be allowed even to move his hands. For the first few days there will be trouble, but he soon yields and becomes contented. One difficulty in this rest treatment is, that insomnia is apt to occur. This may be treated with chloral, or hyoscyamia. The patient is to be kept in bed till every trace of the chorea is gone—usually, 6 to 8 weeks.

When he is allowed to get up, I insist that every afternoon for 2 hours he shall rest upon a lounge.

Chorea may be due to muscular weakness of the eye, or to errors of refraction, or to both. It is folly to say that all cases of chorea are of this origin, but patients should have their eyes examined. It may be that in this ocular condition we find an explanation of the value of rest, and of the injury caused by school work.

My experience is that exercise does harm. Regulated gymnastic exercises might be of use, if they were performed only in the presence of a single adult, and with all exciting elements excluded. After an attack, attention should be given to the eyes, and they should be examined each year before the beginning of school work.

Any anæmia will demand appropriate treatment.

The Legislature of California has passed a bill appropriating $80,000 for the erection of a new Medical College for the University in San Francisco.

THE CAUSE, DIAGNOSIS, AND TREATMENT OF PLEURISY.*

BY L. C. PREVOST, M.D.

I have chosen for the subject of my paper this evening, the cause, diagnosis, and treatment of pleurisy.

In this paper, I shall endeavor to free myself from the influence of books, exposing personal views, the result of my own experience.

I can hardly understand the legitimacy and exactness of all those classifications into acute, chronic, tuberculous, caseous, cancerous, hemorrhagic, and purulent pleurisies.

Pleuritis means inflammation of the pleura, and this inflammation will constitute, if you like, a morbid entity, evolving according to *individuals*. The latter will cause the disease to follow different courses, according to the dispositions of their organisms, and the irregularities of their constitution.

The epiphenomena, which, in a given pleurisy, determine changes in the quality and nature of the effusion, do not authorize our giving to this pleurisy a special name. Because the exudation contains leucocytes, blood-corpuscles, fibrin, should we call the inflammation of the pleura a purulent, hemorrhagic, fibrinous pleurisy?

No; what we must ask ourselves is this:

Is there pleurisy, yes or no? The fever, the stitch, the cough, and especially certain physical signs, cause us to recognize that the pleura is inflamed; that is all we want. Let us, hereafter, carefully watch the evolution of the evil, and find out, in the patient's organism, the reasons which will cause the inflammation to divert from the normal natural course.

The tissues of the human body are governed by the immutable laws of normal and pathological physiology. Amongst the theories invented to explain pathological phenomena, one faithful expression of truth has survived, "*Ubi stimulus, ibi fluxus.*"

That stimulus may vary as to its nature, but nevertheless its presence is indispensable. Under its influence, the intimate exchanges, of which our tissues are the stage, deviate from the physiological course. There arises a disorder ruled also by the fixed laws of pathological physiology, but the accomplishment of which can be disturbed by the nature of the soil where the phenomena take place. Hence, varieties in the behaviour of diseases, but varieties not susceptible of a methodical and uniform classification, owing to their differing with each individual.

The pleura is inflamed because it has been irritated. But where do these phlogogenic irritants come from?

From outside of the body, in the vast majority of cases; from inside, also, according to those who acknowledge, as causes of pleurisy, the sundry morbid blood conditions produced by various diatheses, such as tuberculosis, rheumatism, cancer.

The principal, the most important, most frequent cause of pleurisy is external; the sudden impression of cold on the surface of the body. The shock impressed at the periphery determines disturbances in the neuro-vascular apparatus of the pleura. The histo-chemical elements of the serous membrane, irritated by that sudden interference with their normal functions, lose their head, as it were, and inflammation begins, *ubi stimulus, ibi fluxus.*

Should there exist, by chance, in the organism, pathogenic germs, either latent or active, *e.g.*, the micro-organisms of the tuberculous, or cancerous, or rheumatic diatheses, they will rush on this new prey, and from that moment these microscopical despots will command the evolution of the morbid process, and cause it to deviate from the path traced out by the laws, that rule the normal course of phlegmasias.

If, on the other hand, the subject is absolutely sound, and void of the above mentioned dyscrasiæ, pleurisy shall then pursue its normal course. We shall have a simple acute inflammation of the pleura, "a frigore," free from all complications. This is the one I have in view in this present study.

By subjective and objective signs, attracting attention to the affected organ, we recognize the disease we have to deal with.

In every pleurisy, two things are to be considered. First, the inflammation proper of the serous membrane, and, secondly, the effusions which are the consequence of it.

When once the pleura has been irritated, it becomes the seat of an active hyperæmia; the subserous tissue impregnated with phlegmasic

* Paper read before the Ottawa Medico-Chirurgical Society.

products is thickened; the epithelial cells become swollen and detached over a more or less extensive surface. The pleura denuded is rough, uneven—very soon it becomes shaggy, owing to papilliform granulations due to proliferation of the connected tissue. Later on these will undergo organisation, forming neo-membranes which will establish adhesions between its two layers, new blood-vessels will form into them, and they will then be endowed with all the properties of ordinary living tissues.

This hyperplasia solely constitutes the initial period of pleurisy. The interstitial exudation has not yet appeared, and to this fibro-plastic formation alone in the parenchyma is limited what has been called dry pleurisy, a bastard and exceptional form of pleural information. .

At that period, the patient complains of the rigor and fever which accompany all commencing inflammation.

The fever is, with regard to inflammation, what smoke is to fire. As long as it persists in pleurisy, the phlegmasic process has not ended its evolution. When it has disappeared, we may conclude that inflammation has almost, if not altogether, undergone all its periods.

Pleuritic fever is never very considerable, and it very seldom reaches 104° Fah. Ordinarily it oscillates between 102° and 103° in the evening, and its thermometric curve presents no uniform character as in pneumonia.

To the chill and fever is soon added an intense pain, generally situated under the nipple, and not produced by the sufferings of the pleura, but by radiation of the irritation and phlegmasic process of the serous membrane towards the intercostal nerves.

The pleura is not sensitive—it has no nerves, any more than the peritoneum, or the meninges. Intercostal nerves are in immediate relation with the pleura in the posterior third of their course; owing to this vicinity they are inflamed in pleurisy, as has been demonstrated by necroscopic observation. As all irritations of a nervous trunk resound at its terminal expansions, the stitch will be felt on the lateral or anterior part of the chest.

This pain is exaggerated by pressure. This accounts for the patient avoiding, at that period, lying on the affected side, contrary to what he will do later on.

The lung being still able to fulfil its functions, dyspnœa is slight, and caused solely by the fear of increasing the pain by a total amplication of the thorax, and also by the fever which increases combustion, and overloads the blood with carbonic acid.

As the inflammation of the parietal pleura transmitted to the intercostal nerves produces pain, so the inflammation of the visceral pleura, propagated to the adjacent cortical layers of the lung, and also to the bronchial ramifications, excites the terminal expansions of the pneumogastric, which carries the irritation to the bulb and produces by reflex action the contraction of respiratory muscles; the patient coughs.

The pleuritic cough is dry, not followed by expectoration, as in bronchitis and pneumonia, where a foreign body, exciting the expansion of the vagus, similarly provokes a tutelary reflex spasm, which expels the cause of irritation.

If you were called early enough, on applying the ear to the affected side, you shall no longer hear the soft vesicular murmur audible in the sound side, but a characteristic friction-sound, produced by the rubbing of the pleuræ thickened and covered with granulations. This friction fremitus, is of a dull, grating character, and consists of a quick succession of detached sensations, like the creaking noise of the bending of new leather. It is isochronous with the respiratory movements, and unaltered by coughing. Its intensity is sometimes so great that it becomes perceptible to the touch, and communicates to the hand, applied upon the thorax, a peculiar thrilling sensation.

Very soon the disease will enter a new phase. To the parenchymatous exudation will succeed the interstitial exudation produced by vascular exosmosis The transuded liquid oozing through the serous membrane, deprived of its epithelium, infiltrates between the layers of the pleura, and gradually increasing, will soon fill up the pleural cavity. The effusion will modify the already existing symptoms, and give rise to new phenomena, manifested especially by physical signs, all of which result from the interposition of a non-conducto · between the lung and the chest walls. This wholesome shower will, at first, relieve the clouds accumulated by the inflammatory storm in the parenchyma of the serous membrane. The intensity of the

subjective symptoms will immediately diminish. The stitch decreases with the diminution of the neuritis; temperature lowers; the cough partially loses its frequency, as well as its intensity, owing to the momentary relief of the pneumogastric irritation. It will not altogether disappear, on account of the irritation produced by the presence of exudation itself. Later on, however, owing to the deposit of false membranes on the surface of the pleural cavity, and the sensitiveness of the terminal expansions of pneumogastric being somewhat deadened by the habit of contact, the reflex action will no longer take place, and the patient will cease to cough, unless, by some sudden movements, *e.g.*, quickly sitting up in his bed, he allows the effusion, not yet totally filling the pleural cavity, to come and irritate peripheric branches of the vagus situated on a level with sound, bare, and unarmed portions of the pulmonary pleura.

We must not forget that the patient is generally resting in the dorsal decubitus, on a plane inclined downwards, the shoulder higher than the rest of the body.

Therefore, the superior level of the effusion, in most cases, is perpendicular to the horizontal surface of the bed, instead of to the axis of the body.

Besides, this effusion is not exclusively serous; as it is an inflammatory product, it contains a large quantity of fibrin, which renders it slimy and causes it to adhere to the pleura, and prevents its entire displacement when the patient sits up.

Such is the explanation of the parabolic percussion line of pleurisy, first described by Damoiseau.

Therefore, the effusion, at first, will collect at the postero-inferior part, and then rise by capillarity to the lateral, and, lastly, the anterior portion of the thorax. At the beginning, it only consists of a thin layer of liquid interposed between the lung and the chest walls, where it performs the functions of a vibrating reed. Not profuse enough to occasion a dulness appreciable to percussion, it already hinders the transmission of sonorous waves, and auscultation shows a weakened vesicular murmur. The voice has a trembling character, like the bleating of a goat. That sound, called ægophony, always indicates that the effusion is not abundant.

The effusion, increasing, the lung diminishes in bulk, owing to its retractility; but, very soon driven back, it allows the serous portion of the effusion to accumulate at the inferior part. At this level, vesicular murmur has disappeared, the percussion sound is dull, and the voice cannot be transmitted. At the superior part, we still hear a soft, clouded blowing, where the liquid sheet has remained thin enough to transmit the prolonged vesicular murmur.

The parenchyma of the lung, compressed by the gradual increase of the effusion, at last becomes impermeable. Only the sound of the middle bronchi is then transmitted through the liquid and the condensed lung tissue.

The timbre of the voice is, in the meantime, altered; there is bronchophony. I wish to call your attention to the fact that bronchophony has, with regard to the physical condition of the lung, the same diagnostic signification as the bronchial respiratory murmur. In all instances, its occurrence, its distinctness, its temporary disappearance and its reappearance, are dependent on precisely the same circumstances as bronchial respiration, and when the latter is absent, bronchophony also is wanting.

Later on, when the pressure of the effusion is at its utmost, the middle bronchi themselves will be flattened, so that nothing but the loud and voluminous sound of the large bronchi will be heard. Then silence will reign at the lower third of the chest, and at the upper two-thirds we shall have amphoric or cavernous respiration voice.

At last, when the pleural cavity is totally full of liquid, there will be a general flattening; the whole broncho-pulmonary apparatus becomes inaccessible to air; nothing can be heard.

As soon as the lung has begun to recede before the ever-increasing exudation, the percussion sound becomes dull, and gives to the hand a sensation "*tanquam percussi femoris.*"

There now appears a phenomenon pathognomonic of pleuritic effusion. If the patient count aloud, while you successively apply your hand flat on either side of the thorax, you will perceive a total loss of vocal fremitus on the diseased side. This absence of vocal thrill is extremely precious and generally easily appreciable.

The lung, chased by the always rising tide,

reduced to the size of a shrunk up stump, seeks refuge in a corner of the anterior mediastinum, on a level with the sterno-clavicular articulation. If it still contains a certain quantity of air, percussion of the antero-superior part of the chest will produce a tympanitic sound, all the more appreciable owing to the general dulness of the rest of the thorax—the "*bruit skodique*."

When air can no longer enter the lung, even then we can sometimes determine another resonance, *sui generis*, due to vibration of the column of air in the trachea. This phenomenon —the cracked-pot sound—is very rare in pleurisy.

What does the patient say during all that time?

Not much. It tires him to speak; the least exertion puts him out of breath, for he has only one lung; the other one being obliterated. And even the relatively sound lung is not very valorous. Compelled to perform alone the respiratory functions, it is, besides, congested by the blood it receives from the opposite compressed lung.

At this period, decubitus is different to what it was at the beginning. The patient more willingly rests on the sound side, or on his back. It is all very well then, because the effusion still allows the diseased lung to fulfil more or less its functions. But later on, when that lung no more belongs, as it were, to the respiratory apparatus, if the patient should lie on the unaffected side, and thus render immovable, by the weight of the body, the ribs, allowing them, besides the liquid, to compress the only lung which permits respiration, he will simply smother.

Hence, at this stage, the patient always lies on the affected side, which is no longer painful, thus granting the healthy side all liberty of dilatation. Therefore, whenever a patient says he is habitually oppressed, but hardly coughs, that lately he has been unable to lie on but one side of the body, that he is immediately threatened with suffocation whenever he attempts to remain on the opposite side, we should suspect that he has an enormous effusion in the side upon which he is compelled to lie habitually and exclusively.

The general aspect of the patient, his walking, are also quite significant. It seems that the pail of water, which lies heavy upon one side of his diaphragm, draws down the whole corresponding part of the chest. The patient is slightly stooped sideways, the shoulder a little lowered, the fore arm flexed, and the hand resting on a level with the belt; in this position he walks, prudently and slowly. Should the face be pale, the nostrils dilating, and the voice broken, to take breath, in the middle of a sentence, then think at once of a very abundant pleural effusion.

Inspection may be of great aid in the diagnosis. The effusion, if situated in the right side, forces down the liver; when situated in the left pleura, deviates the heart towards the right side. When the quantity increases to great extent, the chest gets enlarged and presents, on the affected side, a quite characteristic globulous shape.

When, later on, the fluid is absorbed, the return of the parts to their normal dimensions will depend upon the permeability of the affected lung. Should all parts of the lung become expansible, the thoracic wall will return to its physiological situation; there will be no deformity. If a portion of the lung remains definitely impermeable, it will not again fill up the whole thoracic cavity. A vacuum will be created, which will be filled by the chest-wall, yielding to atmospheric pressure.

Towards the end of the third week, in the normal course of the disease, the effused products are gradually reabsorbed. The liquid part is absorbed by the lymphatics: the solid, the false membranes, undergoes granulo-fatty metarmorphosis, and is taken up in its turn; fever totally disappears, and after four, five, or six weeks, everything is over.

The disease with which we may confound pleurisy is pneumonia. In inflammation of the lungs, we meet, as in pleurisy, with rigor, fever, stitch in the side, dulness, bronchial respiration, and broncophony, but there exists, between the two maladies, certain shades in the symptoms, which ordinarily enable us to surely fix the diagnosis. Fever is altogether characteristic in pneumonia, and besides its much greater intensity, it runs a well known definite cycle. The cough is not dry, as the pleuritic cough; it is followed by pathognomonic, slimy and blood-tinged expectoration.

The percussion sound, although evidently dull, is, however, much clearer than in pleurisy, where the hand that receives the percussion-stroke feels as if the parts underneath were thoroughly deprived of elasticity. The bronchial murmur, the bronchophony, have not the muffled, distant character of pleuritic effusion. The resounding of the patient's voice also seems more superficial and louder, producing sometimes even a really painful impression upon the tympanum. The most important difference between these two diseases is the character of the vocal fremitus. Vocal vibrations, instead of being diminished or totally abolished, as in pleuritic effusion, are not only perceptible, but nearly always considerably increased. Therefore, careful examination of the vocal thrill, especially in doubtful cases, should never be neglected.

If, after the most particular attention, a doubt still persists, we have the hypodermic syringe.

I may not quit this subject of diagnosis without calling attention to the necessity of always carefully examining the chest in those obscure cases where the patient, although complaining of a mere uneasiness, and perhaps some slight dyspnœa, still has none of the classical symptoms.

These latent pleurisies often silently run their course without preventing the patient from attending to his duties, until at last the persistence of some stubborn symptom compels him to consult a physician, who himself is astonished to find an enormous effusion.

What shall we do with that mass of liquid which fills the pleural cavity? Our conduct will depend upon two considerations: 1st. The behaviour of the effusion. 2nd. The duration of the disease.

The natural course of pleurisy ordinarily tends towards recovery. Our duty is to remain passive, but attentive spectators, of the phenomena taking place under our eyes.

But if the effusion threatens to cause some accidents, or if the inflammation, having long ago disappeared, that effusion show a tendency to last forever, then we must act.

What way shall we interfere? The disease is in the first 15 or 18 days of its course; inflammation is still going on in the pleura; there is fever, dyspnœa, even orthopnœa; the patient is suffocating; examination reveals an enormous quantity of liquid; it is obvious that we would be wrong in remaining idle in the face of such grave symptoms. What shall we do? Shall we have recourse to blisters, purgatives, diuretics, to promote the disappearance of the effusion? You may thus, it is true, momentarily check the activity of the exudation; the effusion will not increase, but it will not diminish either.

The best thing, under these circumstances, is paracentesis. We might, in the meantime, if you like, tone up the patient by the exhibition of the tincture of muriate of iron.

Thoracentesis no more cures pleurisy than tracheotomy cures diphtheria, but in either case, we suppress an epiphenomenon which had become of a primordial interest.

Effusion may be reproduced, it is true, since the inflammation which gave rise to exudation still persists; we will remove it again; while we remove the immediate causes of the most alarming symptoms, nothing prevents our having recourse to local blood-letting, should the phlegmasic manifestations invite us to oppose a direct treatment to them. Twelve or eighteen leeches, in similar occurrence, never do any harm.

Even when no very alarming symptoms exist, there are cases in which we must never put off tapping the chest, whatever may be the stage of the disease; especially, when we ascertain the presence of a considerable effusion in the left pleura. These effusions in the left side of the thorax are always very dangerous, owing to the displacement of the heart, and the torsion of the large blood-vessels. Sudden death has often been the result of them, and it would be, at the least, a grave imprudence to wait before tapping the chest.

The disease has lasted four or five weeks, fever has disappeared, inflammation is extinguished, perfect calm has, for a long time, been reigning in the pleura; still, its cavity contains a considerable quantity of fluid, which threatens to everlastingly stay there.

Here pleurisy exists no longer, the effusion is nothing but the remains of it, a "caput mortuum," a part of the ruins the storm has left after it.

Shall we here, again, have recourse to blisters, diuretics, and purgatives? No more than in the first case.

After sero-fibrinous pleurisy, as has been lately demonstrated by Ranvier, Cornil, Wagner, and others, the lymphatics are filled with coagulated fibrin, and this obstruction surely opposes a barrier to the reabsorption of the exudation. How can we hope that this effusion could traverse the thick fibrinous coat spread out on the surface of the pleura, and which, before it disappears itself, will have to undergo very slow fatty degeneration?

Here again, and especially here, aspiration will get us out of trouble. A single puncture will settle the question, because, then, we need not fear the reappearance of the liquid, since inflammation of the pleura exists no longer.

The operation of thoracentesis is a thoroughly innocuous operation. Some have mentioned the possibility of wounding the intercostal artery with the needle of the instrument. Well, I defy the most inexperienced to do it. That artery is hidden behind the inferior border of the ribs, and is never met by the trocar, especially when the latter is introduced in the lateral part of the chest.

Order the patient to cross his arms, in front of his chest, and by a sharp push insert the needle at a point situated in the intercostal space corresponding to the inferior angle of the scapula, and a little outside of that angle, when the latter has been itself deviated outwards by the movement of the arm brought forward.

This point offers great advantages; first, it is easily determined, and it allows our putting the patient in an easy position for the operation. To avoid, after the operation, that violent and so alarming cough, which may persist for hours, and even be accompanied with the gravest asphyxic symptoms, you must not push the aspiration too far, taking care to never thoroughly empty the pleural cavity. We should never withdraw more than 40 to 50 ounces of liquid at one time, always following besides Bowditch's precept, who cautions us to suspend the withdrawal of fluid the moment the patient begins to suffer in breathing, even in the slightest degree.

The next meeting of the British Medical Association, will be held at Birmingham, during the last week in August, under the presidency of Dr. Willoughby F. Wade.

Selections.

THE TREATMENT OF INCOMPLETELY DESCENDED TESTICLE.

BY W. WATSON CHEYNE, M.B., F.R.C.S.,
Surgeon to King's College Hospital, and the Paddington Green Children's Hospital, etc.

On account of the grave inconveniences which attend the retention of testicles in the inguinal canal, I have, like a good many other surgeons, made attempts in several cases to bring them down into their proper position in the scrotum, but I cannot say that the results of these attempts have been very brilliant. The following case, however, in which I adopted a new method, and in which the result was practically perfect, may be of interest. I may say that I have tried most of the plans suggested, and have in all cases, after freeing the cord and testicle, stitched the latter to the lower part of the scrotum by means of catgut, and afterwards placed catgut sutures in the external ring to prevent the testicle slipping up again into the inguinal canal. The immediate result is that as soon as the hold on the testicle is relaxed, it retracts to the external ring, drawing in the scrotum with it, thus forming a pucker, and the ultimate result is that the testicle lies at, or very little below, the external ring, in a position very little better than that which it formerly occupied. It struck me, however, that if we could keep up the tension on the cord for some days it would gradually stretch, and that then, when the tension was relaxed, the testicle would remain in its new position in the scrotum.

I had a small triangular wire frame constructed which fitted into the perineum and over the pubes, and was kept in its place by threads of carbolised silk, attached to each angle of the frame and passed round the abdomen and thighs At a point opposite the apex of the scrotum a projecting bar was attached to the frame to which the thread which passed through the cord could be tied. The mode of operation in this case was as follows: The testicle and cord were freed and brought down into the scrotum, in which a pouch was formed for its reception. A strong catgut stitch was then passed through the structures of the cord immediately above the testicle, and both ends were brought out through a hole at the

apex of the scrotum and tied around the projecting bar. Care was taken that the *vas deferens* should not be on the side of the cord through which the thread might cut its way. In this way any desired amount of tension can be kept up on the cord, and in this particular case I did not stretch the cord at the time of the operation as completely as I intended ultimately to do, but tightened it at the second dressing some days later. After stitching up the external ring and the wound, the whole arrangement was enveloped in antiseptic dressings. I did not in this case pass the stitch through the apex of the testicle, but through the cord, because I did not wish to set up orchitis, nor to destroy any of the testicular structure, while I thought the stitch would not cut through the cord so quickly as through the testicle.

Of course it is only in a certain proportion of these cases that any operation with the view of bringing down the testicle can be of benefit, and I should only attempt it in cases where the testicle was fairly movable in the inguinal canal, and could be readily made to protrude at the external ring. Where the testicle is retained at the upper part of the inguinal canal, the cord very short and the testicle much atrophied, I believe it is best, in view of the serious trouble to which it may afterwards give rise, to excise it at once and bring together the walls of the inguinal canal. The following is the case to which I allude.

H. E., aged 11, was admitted into the Paddington Green Children's Hospital on February 27th, 1889. Both testicles were lying at the lower part of the inguinal canal, and could be readily made to protrude at the external ring; they had been in this position since birth.

On March 1st I operated on the right side, but I did not employ the plan above described. In order to carry out the same principle, however, after stitching the testicle to the bottom of the scrotum, and while the assistant held it in that position, I passed a catgut stitch through the skin at the junction of the scrotum and thigh, through the cord just below the external ring and through the skin on the other side of the scrotum, with the view of, so to speak, anchoring the testicle in the scrotum. The wound healed by first intention, but the ultimate result has been that though the testicle is considerably below the external ring, it is not in its proper position in the scrotum.

Before operating on the left side, I therefore had the wire frame described above constructed, and on April 2nd I operated on the left side in the manner which I have mentioned. The dressing was changed next day, and everything was looking well; patient comfortable. It was again changed on the 6th, and the catgut tightened as much as possible; the wound had healed. On the 13th the stitch was removed, the apparatus left off, and a small collodion dressing was fixed over the puncture through which the stitch had passed. The testicle hardly receded at all when the stitch was divided, and there was a good deal of thickening about the cord and the external ring, which no doubt helped to keep things in position. The patient was allowed to get up on the 15th, and went home on April 22nd. He was exhibited at the Medical Society about ten months later, when the left testicle occupied its normal position in the scrotum.—*British Medical Journal.*

THE EFFECT OF THE ENTRANCE OF AIR INTO THE VEINS.

Some months ago I published an account of experiments on seventy dogs, in which I found that the entrance of air into the veins of living animals was not so lethal as is generally believed. It has been taught that minute globules of air entering the veins will produce fatal results, or, at least, most serious symptoms. I discovered the fallacy of this by making injections of solutions of drugs. I found that when a small quantity of air was introduced accidentally, no evil results followed. On looking up the literature of the subject, I found that the mass of evidence was really against the common belief. There are quite a number of cases on record where patients have died suddenly during operations, and death was attributed to the entrance of air.

The first experiments are attributed to Wepfer, who is said to have killed an ox of stupendous size by blowing air with his mouth into its jugular vein; while Redi, over two hundred years ago, stated that he had killed in a similar manner two dogs, a horse, a sheep, and two foxes. Similar studies have been made by

Heyde and Brunner. Ruysch, Valsalva, Morgagni, and others, have at autopsies recorded the appearance of quantities of gaseous fluid in the vascular system, which they believed to be air. Very much later, Bichat made startling announcements as to the small amount of air required to cause death when so introduced, but Nysten, a few years later, showed the fallacies in Bichat's assertions.

"In 1818, a patient of Beauchene, at the Hopital Saint Antoine, while he was extirpating a tumor of the right shoulder and lateral and lower part of the neck, died very suddenly, 'under circumstances which made him believe that this was occasioned by entrance of air into the vascular system through an opening in a vein.' Further cases have since been reported by writers in this country and abroad, by Amussat, Mott, and others.

"In the experiments of nearly all the early investigators, the air was introduced by blowing with the mouth, or a syringe, but Amussat carried out a series of studies in which he opened the jugular vein and allowed any air to enter that could do so.

"The experiments of Nysten proved that only large amounts of air produce fatal results, the quantity varying from forty to one hundred and twenty cubic centimetres, according to the size of the dog.

"Barthelemy has also found that in six horses, weakened greatly by the withdrawal of blood, as much as from four to six l tres of air must be introduced intravenously to cause death, and estimates, in consequence, that a man weighing one hundred and thirty-six pounds would be killed only by two-thirds of a litre. Even the experiments of Amussat force him to the conclusion that a considerable quantity of air must be used to cause death.

"The conclusion to be reached, therefore, from all experimental researches, is, that enormous amounts of air must enter a vein to cause death, and that no such quantity can possibly find its way into a vein which has been injured by the knife of the surgeon. While we have a large number of cases reported of sudden death under operations where veins were opened, in the majority of them the cause of death has been guessed at and not proved. The only case which approaches in any way toward authenticity is that of Mott, who saw a serious but not fatal result induced by the entrance of air into the facial vein, and even this is not a proved case. The case of Barlow is equally doubtful as to the real cause of death.

"There are a number of cases on record where death has resulted, according to the physician in charge, from the entrance of air into the uterine sinuses.

"Supposing that ordinary atmospheric air is really capable of acting in the manner generally thought, the question arises as to the method of its influence. Erichsen believes it to be due to the frothy state of the blood, which prevents the due transfer of the circulating fluids through the pulmonary tissue, and Bell believed death to be due to the transference of air to the base of the brain.

"Cormack has thought death to be due to gaseous distention of the heart, and Moore thought it to be due to the entrance of air into the cardiac cavities. Other observers have found air in the right heart, and concluded that in this way the blood is prevented from eventually getting to the lungs and general system. Again, it has been thought that the air prevents the closure of the valves of the heart, or that the bubbles of air entering the smaller capillaries acted as emboli.

"Taking up the last theory first, we find, in the first place, there is no evidence whatever to prove that air may not be driven anywhere that blood can flow, and it is, to say the least, curious that any one should suppose that a bubble of air, which is compressible in itself, and capable of assuming any form under pressure, should form an impassable barrier against which a blood-pressure of two hundred millimetres could press in vain—a pressure made up of blood, a virtually incompressible body. This seems to be sufficient evidence of the falsity of any such theory.

"Again, why should the air in the cavities of the heart prevent the valves from closing? We are accustomed to test the tightness of rubber bags by inflating them with air or water, and if the valves can close on a current of blood, why can they not do so upon a current of blood and air mixed? If the air was as heavy as mercury, and as difficult of propulsion, such a theory might stand.

"Even the theories of the causes of the supposed deaths in man do not, therefore, stand before a rigid examination, which is hardly to be wondered at when we have proved that the quantity of air entering the veins under such circumstances cannot be very great.

"According to Ashhurst and Agnew, the veins of the neck are the ones most liable to be entered by air; and it is stated by Agnew that the frequency of this accident is due to the fact that the venous trunks in that region are in many places attached to the deep fascia, which prevents collapse of their walls when wounded; for this reason this part of the body is spoken of as the 'dangerous region,' according to Ashhurst.

"The explanation of the method by which the air finds entrance to the veins, is supposed to be a process of suction produced by the expansile movements of the chest in inspiration. Practically, most surgeons will agree with me in stating that generally the blood-pressure in the jugular vein is sufficient to cause so great a hemorrhage as to prevent any air entering the vein; and I have proved the fallacy of the suction theory any number of times by leaving an open canula in the jugular vein, the vessel being tied above to prevent hemorrhage."

Two dogs were then taken, and into the external jugular vein of one was injected twenty cubic centimetres of air, and into the jugular vein of the other forty cubic centimetres. The animals were subsequently released, and showed no apparent bad effects.—*H. A. Hare in The Cincinnati Lancet-Clinic.*

CHLORALAMIDE.

Chloralamide, one of the most recent of the new hypnotics—somnal alone being of later date—is the product of a mixture of chloral anhydrid and formamide. It is not a mechanical mixture. With urethrane, paraldehyde, sulphonal and others, it is a member of the fatty ether series. It occurs in colorless crystals, and is soluble in nine parts of water and one and a half parts of alcohol. It has a mild, slightly bitter taste and neutral reaction. Alcoholic and aqueous solutions separate when the temperature is about 140° F. It is decomposed by caustic and carbonic alkalies, but is not affected by weak acids.

The reports, with few exceptions, are most favorable. The observations have been chiefly clinical. An analysis of these would lead to the belief that chloralamide is a valuable hypnotic, producing a quiet, natural sleep lasting from eight to thirty-six hours, varying irregularly with the dose. In the majority of instances no unpleasant after effects were produced, though at times there was giddiness, anorexia, or headache. No effect was produced on the circulation and urinary secretion or temperature.

The modes of administration have been various, in alcoholic solutions, in tea, beer, or hot water; or by enema. The dose advised is from thirty to forty-five grains, though in some cases even fifteen grains may give sleep. The drug is said to act in from one-half an hour to one and a half hours.

As compared with chloral and sulphonal, most of the writers find chloralamide superior, having equal hypnotic powers and but few unpleasant after effects; other advantages claimed are that it does not depress, is readily soluble, is pleasant to take, and is cheap.

Under Dr. Osler's directions, chloralamide, obtained through Merck, has been used in the hospital in fifty cases. The dose has varied from ten to sixty grains, both in single and in divided doses. The drug has always been given by the mouth, either in powder or in alcoholic solution. In order to estimate the value of the drug, the following plan was followed:

The patient was asked in the morning how he or she slept, while the night nurse was told to observe closely and note the time of sleeping, and the character of the sleep, making half-hourly memoranda. In the morning the patient was again asked as to the sleep of the night just passed, his condition on awaking, and his statements were compared with the written report.

An analysis of the results reveals the following: The drug was employed in fifty cases, and one hundred and eighty-six separate doses were given. Of the fifty cases, five were from the Dispensary, the remainder from the wards. Forty were poor sleepers, as a rule; ten were not troubled with sleeplessness. To the latter the chloralamide was given in order to note the effect on the pulse, duration of sleep, etc. The

list of diseases embraces phthisis, cardiac disease, chronic nervous affections, diabetes, aneurism, typhoid fever, pneumonia, bronchitis, and others.

The results were classified under three heads: —those in which there was an undoubted hypnotic action, those in which the action was uncertain, and those in which the result was unmistakably negative. As an example of the first class, Case VIII might be cited: C. J., male, colored, aet. 40; diabetes; a light sleeper, generally awoke four to six times through the night. He usually had six hours broken sleep. December 11th. Grains thirty at 9 p.m. Asleep a few minutes before ten—9.55—and slept soundly till 6. Not drowsy on awakening. No ill effects. Of the 186 trials, eighty-six fall under this head, or 46.32 per cent. of positive results.

Case XXXVII illustrates the negative cases:—

G. W., male, white, aet. 32, transverse myelitis, sleeping only four hours at night. January 6th. Grains twenty at 11 p.m. Slept lightly from 11 to 12, and from 3 to 5. January 7th. Grains thirty at 10 p.m. Not asleep till 3 a.m., when he dozed for two hours. Under this head came eighty-five administrations—per cent. 45.69. In fifteen trials the action was uncertain.

In sixteen instances ill effects followed—headache in eight, and a sense of being dazed and confused in four; while in two there was mental derangement.

Sleep followed within an hour after administration in nearly every positive case, and generally within the first half-hour. In only one case did it last more than nine hours. The largest single dose given was forty grains, and on three occasions this was followed by a second dose of twenty grains in five hours without any apparent effect, except to cause delirium and wakefulness in one of these. In one case twenty-seven consecutive doses were given, with uniform result, so that there does not seem to be a necessity of increasing the dose, nor was a cumulative action noticed.

From these observations, limited, it is true, we cannot speak very highly of chloralamide as a hypnotic. It is much inferior to sulfonal or chloral, and possesses no special properties which warrant its introduction into general use. —*Harry Toulmin, M.D., in Johns Hopkins Hospital Bulletin.*

ON THE IRRATIONALITY OF THE TREATMENT OF DIPHTHERIA BY STEAM.—When, in bacteriology, we proceed to make pure cultures, one of the first things required is proper temperature; the ground for breeding having been selected and prepared, we inoculate it and place the culture in the required atmosphere, which is nearly always up to 35°C, *and moist.* In short, then, in moist warm atmospheres, colonies of micrococci flourish best, consequently, if we, by playing warm vapour upon upon such a festering hot-bed of micrococci as diptheritic membrane presents, furnish the one essential necessary to promote their multiplication, is it any wonder that the results of such treatment prove negative, and that the membrane grows under our very eyes? The addition of an antiseptic substance does not neutralize the evil consequences of such unscientific treatment, for were the antiseptic fluid sufficiently strong to kill the micrococci, it would likewise kill the patient by absorption. Feed the patient on beef tea, chicken broth, and the like, in addition to this, and you supply him with the very materials we use in bacteriology for pure cultivations, in which micrococci develop best and increase prodigiously. Steam and antiseptic vapour, then, is decidely injurious in the treatment of diphtheria, since it promotes the growth of the parasite, according to bacteriological dicta which are indisputable; the diet, which includes bouillon or gelatine, is also unscientific, and must be reformed. The frequent and continuous use of steam necessitates tracheotomy, by washing down into the larynx all the soluble and infectious constituents of the diptheritic membrane, notably the micrococci, which are caught at the vocal cords and forced to breed through being fed continuously from above.—*F. W. Elsner, in Australasian Med. Gazette.*

THE INFLUENCE OF COLD IN PNEUMONIC INFECTION.—Dr. G. Lipari, of Palermo, in his recent experiments on the infectious nature of fibrinous pneumonia, essentially confirms what is known of Fraenkel's pneumonococcus, and has also succeeded in proving the influence of

cold as a factor in the origin of fibrinous pneumonia. The endo-tracheal injection of pneumonic sputa or pleuritic exudation of animals which had died from pneumonococci gave a negative result, but when the author, before or after the endo-tracheal injection, exposed the animals to cold, the result was very different. Of eight animals so treated, six died with clearly established pneumonic infiltration. The author supposes that the cold paralyses the ciliated epithelium of the bronchi, and at the same time causes their mucous membrane to swell, both of which pathological processes favor the descent of the infectious material into the alveoli. These experiments were doubtless undertaken with a view to harmonise the old and new teaching upon the origin of this prevalent disease.—*Lancet.*

FOREIGN BODIES IN WOUNDS. By A. Frankel. The author made a series of experiments upon rabbits, by introducing foreign bodies, such as soiled clothing, etc., with views of determining to what extent, these, of themselves, would prove harmful; comparing the results obtained between those unprepared and used directly from wear upon the body and presumably infected, those previously disinfected or sterilized, and those which had been purposely infected with the staphylococcus pyogenes aureus, streptococcus pyogenes, etc.

As a result of these experiments, Frankel concludes as follows: 1. Foreign bodies, passing into wounds, do not of themselves set up phlegmonous processes, but are covered in by the healing process without any considerable general or local disturbance. 2. This may be equally true of smooth bodies, as well as those which have surfaces and interstices upon and in which numerous germs may lodge. 3. Those foreign bodies which were infected with specific pathogenic germs peculiar to diseases arising in the lower animals, such as anthrax, as well as certain chemical substances, such as croton oil, turpentine, etc., produced severe disturbances or progressive suppuration. The occurrence of tetanus is so rare that the entrance of earth and soil must likewise be comparatively dangerless, inasmuch as tetanogenic earth would be but seldom brought into contact with the wounded parts.

It may be said in commenting upon these experiments, that the wounds were immediately closed, and antiseptically treated, after the introduction of the foreign bodies. In cases of injury with the entrance of foreign bodies, the case is different, the wound remaining a longer or shorter time uncared for, and consequently the further entrance of germs from the atmosphere is invited. Although at the present time there is no reason to suppose that the tissues of rabbits break down into suppuration more readily than those of man, yet experiments bearing upon these points are still wanting.—*Wier Klin. Woch.—Annals of Surgery.*

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Communications for this journal should be addressed to the Editor. We shall be glad to receive from our friends everywhere current medical news of general interest.

When a change of address occurs please promptly notify the Publishers, THE J. E. BRYANT COMPANY (*Limited*), 58 Bay Street.

TORONTO, MARCH 17, 1890.

MEDICAL LEGISLATION IN BRITISH COLUMBIA.

The medical laws in this Province have been rather mixed of late years. When the Act of 1886 was passed, it was thought the Council then incorporated would have full power to deal with all medical comers, but it soon transpired that an Act passed in 1870 had not been repealed. This omission permitted men registered in Great Britain and Ireland to register here without submitting to the Council's regulations. Last year the Legislature enacted that homœopathics should also be allowed to practice in British Columbia, without being subjected to the rules and regulations of the Council. Thus, Canadian graduates were handicapped. But although the Medical Council was very apethetic in this matter, a champion was at hand in the person of Dr. M. S. Wade, of Victoria, B.C.

He issued, at his own expense, a pamphlet, giving publicity to this unheard of injustice, and he now has the satisfaction of knowing that his vigorous effort was not in vain, nor his money ill spent, inasmuch as the Attorney-General of British Columbia, impressed with the force of logic and equity, has just secured the passing of an amendment Act, by which all medical new comers *must* submit to the Council. Homœopaths are only to be examined in anatomy, physiology, chemistry, pathology, obstetrics, and surgery.

THE UNIVERSITY OF TORONTO MEDICAL SOCIETY LECTURES.

We referred in our last issue to the establishment of a medical lectureship by the University of Toronto Medical Society. The first series of such lectures was delivered in the new building of the Biological Department, March 11 and 12, by Dr. E. C. Seguin, the eminent specialist in nervous diseases, of Providence, R.I., formerly of New York. Dr. Seguin took as his subject certain diseases of the nervous system. The President of the Society, Dr. Jno. Ferguson, occupied the chair at each of the three lectures. Dr Osler, of Baltimore, was present at the first lecture, and, at the call of the chair, made a few remarks, which were cordially received. The members of the faculty, as well as the students, are always pleased to hear from him on any occasion. We have much pleasure in giving an abstract of Dr. Seguin's first lecture in this issue, and will give abstracts of second and third lectures in succeeding issues. We are glad to state that the lectures were as highly appreciated as they deserved to be on their merits, and these merits were of the highest order.

We have to congratulate the President and members of the society on the success which has attended the inauguration of the annual lectureship, and are pleased to learn that the prospects for the future are very bright. We are all gratified at the interest which has been shown by the graduates, and feel assured that their kind assistance will do much to ensure future success. At the conclusion of the third lecture, it was resolved: Moved by Dr. Spragge, seconded by Dr. O'Reilly, that a cordial vote of thanks be tendered Dr. Seguin for the delivery of his lectures, and for his kindness in visiting the society. Dr. Ferguson, chairman, in tendering the vote of thanks, spoke in high praise of the manner in which the lecturer had treated the subject. Judging by the success of these, the first lectures of the series, he had no doubt that the course would be continued.

The following resolution, moved by Dr. Lehmann, seconded by Dr. Field, was also unanimously approved of:—That this meeting of graduates, undergraduates, and friends of the medical department of the University of Toronto, thoroughly endorses the action of the Medical Society of the University of Toronto in establishing a medical lectureship, and expresses the hope that all the graduates shall assist in the maintenance of the same.

THE CASE OF DR. WALLWIN.

We think that the recent arrest and imprisonment of Dr. Wallwin, of Toronto, was one of the most remarkable acts that has ever disgraced a free and civilized country. Dr. Wallwin is a young graduate of last spring, who, by his own unaided exertions, together with frugal habits, hard work, and steady perseverance, succeeded in passing creditably all the examinations necessary to obtain a University degree, and a license to practice from the Ontario Medical Council. A few months ago he commenced his life's work as a medical practitioner with, probably, all the hopes and fears that most of us, who are older than he in the profession, have experienced.

Early in February he was dragged from his home and imprisoned, on a criminal charge of attempting to procure an abortion. What was the evidence? Nothing but the unsupported statements of an angry and hysterical prostitute, who was well known to the police authorities as a person who had served a term of fifteen months imprisonment in the Mercer Reformatory, for that vile crime of endeavouring to procure young girls for immoral purposes! Medical evidence proved, so far as it can prove anything in this world, that this creature's statements were false in every particular. Newspaper reports inform us that after the arrest, it was

immediately realized that a mistake had been made, and the court was pleased to allow the *accused* "out on bail," with the understanding that he was to wait until it was convenient for his accuser, the Mercer Reformatory graduate, to appear against him.

In the meantime, this interesting prostitute, whose "word was law," was said to be in a very precarious condition, in the General Hospital. The physicians in attendance, however, failed to discover the precarious part of it. But, we are told, there had previously been a harrowing scene in a house of the shady sort in St. John's noble ward. A female was lying there in the agonies of what was supposed to be the last struggle. Her paroxysms were pitiful to behold, but, between them, she both repented and vomited. The prickings of her tender conscience were sharper than she could endure; justice must be done, even though she had to stop vomiting. The spectators were equal to such an emergency, and the authorities were called in. These astute fellows took in the situation at once, and carefully made their arrangements in accordance therewith. The correct machinery was set in motion, and anxious ears listened with breathless interest to the last expiring words of the unfortunate sufferer. Amidst doubts and fears, their efforts were crowned with success—an *ante-mortem* statement was obtained. The officers and onlookers then proceeded to wipe their eyes, and sagely deliberate. It was considered practically impossible that they should make any mistake, as medicine, law, virtue, and justice, were all fully and ably represented. They quickly decided on their plan of action. They sent the dying woman to the Hospital, they rushed the red-handed abortionist to the cells, they took proper precautions for the security of their treasure, the *ante-mortem*, and, proudly conscious of their promptitude and rectitude, departed in peace.

The hospital atmosphere proved rather unfavorable to the vagaries of this virtuous combination of hysteria and fury, as we have previously intimated. In due course the patient recovered, and appeared in the Police Court. She told her story—two medical witnesses were examined—and Dr. Wallwin was acquitted. There was no shadow of a case against him, in the proper sense of the word.

One would naturally ask: who was responsible for this gigantic farce? We understand that no one claims sole credit for the performance. The participators are rather inclined to divide the honors. The *ante-mortem* statement is said to have been placed carefully among the city archives; and the powers that be appear to preserve a *judicious* silence.

For Dr. Wallwin the matter has been a very serious one indeed. He has been made the innocent victim of a monstrous outrage. He took a position, which all must admire, in manfully defying his enemies, who had deliberately planned a blackmailing plot. He was forced to submit to treatment which was as cruel as it was undeserved. The whole case furnishes a rather startling example of the risks to which ordinary law-abiding citizens of Toronto are continuously exposed, through the infamous stupidity of some who are armed with an authority which they are utterly unfit to exercise. We have to offer our sincere and hearty congratulations to Dr. Wallwin, not only upon his acquittal (which often means simply not proven), but also upon the complete removal of any suspicions which may have attached to him at any time.

Meeting of Medical Societies.

TORONTO MEDICAL SOCIETY.

March 4th, 1890.

The President, Dr. Atherton, in the chair.

Dr. Wishart read a paper on

POST-NASAL, OR POST-PHARYNGEAL CATARRH.

This disease, although sometimes primary, is generally secondary, due to extension of inflammation from the nose, ear, or throat.

The branches of the olfactory nerve are distributed to the superior turbinated bone. Loss of taste results from the post-nasal swelling, shutting off access to this bone. The voice is injured and thickened by the blocking of the naso-pharynx; from this condition results also blocking of the eustachian tubes, perhaps otitis media, and perforation of the drum membrane and consequent otorrhoea. Not only is there

injury in this mechanical way, but extension of inflammation to the middle ear is favored by intimate relations between the blood supply of the tube and pharynx and middle ear, and by the anatomical continuity of tissue.

McKenzie of Baltimore, says that sixty to seventy-five per cent. of all cases of ear disease originate in morbid conditions of the naso-pharynx.

Digestion is disordered by the swallowing of a large amount of the mucus poured out by the diseased surface.

Rhinoscopy shows swelling of the lining membrane of the fossa, especially in and around the opening of the eustachian tubes, in the middle of the vault and on the septum. In children the hypertrophy may take the form of adenoid vegetations, involving the whole of the vault. In many cases the pharyngeal bursa of Thornwaldt may be found.

The eustachian tubes may be occluded by swelling of the mucous membrane, or by displacement, due to enlargement of the pharyngeal tonsil.

The mucous membrane may be either hyperæmic or anæmic. The veins, especially on the septum and around the eustachian openings, are frequently prominent. Cysts, due to the closure of gland ducts, may be seen in the vault.

The glands involved secrete an abundant viscid tenacious secretion, of a glairy, greenish, or yellowish color. The moisture is rapidly evaporated by the air, and thus crusts are formed. These act as foreign bodies, and the patient seeks to get rid of them by constant hawking and swallowing, by sneezing, or by forcible and rapid inspirations and expirations.

In the same way there is a constant sense of stuffiness in the nose at the back, and during the night and in the morning the mouth and throat feel dry. Inspection of the pharynx shows the well-known appearances. Reflex phenomena, such as paroxysmal cough, neuralgia, anosmia, asthma, and ear affections, may be produced.

Hemorrhage may occur in the vault, the blood, being swallowed, may excite coughing or vomiting, and thus lead the physician's attention away from the true cause.

Cold, *per se*, is not a cause of chronic naso-pharyngeal catarrh. Heat is a much more important factor. Moisture, associated with heat or cold, is a very fruitful cause. Sudden changes in atmospheric conditions are the great cause.

Bronner attaches great importance to disease of the pharyngeal bursa, as causing naso-pharyngeal disease. The constant secretion poured forth by the diseased bursa sets up inflammatory changes, which spread. These are the so-called incurable cases.

Bucke emphasizes reflex influence from the gastro-intestinal tract as a cause of the condition. Uterine disease may be causative. As to treatment, the first effort should be to relieve the cause. General tonic and alterative treatment to restore the tone of the mucous membrane. The parts must be thoroughly cleansed preparatory to local applications. The post-nasal douche is the best. The spray through the nose or behind the uvula, or snuffing up fluid, are not so beneficial. The nasal douche, even when used by the physician himself, is apt to set up inflammation of the middle ear.

The constant use of too much water is apt to prove injurious.

Enlargement of the posterior portions of the turbinated bones, or of the septum, and adenoid growths, demand operative procedures. If the pharyngeal tonsil be the cause of the disease, it may be extirpated by caustics or galvano cautery. Topical applications of powders, astringents, etc., are not to be relied upon.

Dobell's solution, Seiler's alkaline and antiseptic tablets, or more elegant preparations, as the biborate and bicarbonate of soda, dissolved in listerine and water, may be used for cleansing purposes. Absolute cleanliness of the passages is as necessary for the prevention of extension as for cure. Sanguinaria and galanga have their advocates. Seiler recommends the application of iodine to the post-nasal cavities.

Discussion.—Dr. Price Brown said that before operative measures were applied to the pharyngeal tonsil, due consideration should be given to its physiological function. He thought that Thornwaldt went even farther than Dr. Wishart had represented him, and held that all diseases of nose, and naso-pharynx, and their reflex

neuroses, were due to a morbid condition of Lüschk's gland. Hill taught that the function of this gland was to elaborate leucocytes; Bosworth, on the contrary, holds that from it there is given off a bland secretion of mucus, which lubricates the posterior pharyngeal wall. If such be its functions, we should be somewhat cautious how we interfere with it. If we destroy it altogether, we may produce pharyngitis sicca, a most troublesome condition.

Post-pharyngeal catarrh often results from some morbid condition of the nose, by which the nasal secretion is diminished in quantity; or from stenosis of the nasal cavity, causing œdema of post-pharynx. In such cases the treatment must be directed to the nose.

Dr. R. A. Reeve said that one most important point in connection with post-nasal catarrh is the implication of the ear. For years he had realized the necessity of treating the post-nasal pharynx in cases which seemed to be so purely aural, as even impaction of cerumen.

He mentioned, as other conditions, recurrent earache, cold in the head, with accompanying earache, attacks of deafness in children, commencing in the beginning of winter and lasting more or less through the winter, which are all due to a redundancy of lymphoid tissue in the post-pharynx. Every general practitioner should pay attention to the condition of the post-pharynx, especially in children, and thus prevent the occurrence of troublesome and obstinate disease. Much easier than diagnosis by the finger introduced into the post-pharynx was Bosworth's test. If a spray was passed into one nostril it would reappear at the other, provided the post-nasal pharynx was not obstructed.

By this simple test the general practitioner, indeed anyone, might recognise the condition. Personally, he had treated these cases by means of the forceps, or a scraper. The improvement was, no doubt, due to the local depletion from the bleeding, and the consequent relief of the congestion and catarrh of the eustachian tube, so that the treatment of the ear itself might not be required. He remarked that some cases were incurable. These, as Toynbee taught, were cases in which the mucous membrane was compensating for deficient action on the part of the integument.

NEW YORK ACADEMY OF MEDICINE. SECTION ON ORTHOPÆDIC SURGERY.

Stated meeting Feb. 21st, 1890.

V. P. Gibney, M.D., Chairman.

Dr. Frank Hartley presented a case of

DOUBLE CONGENITAL TALIPES EQUINO-VARUS.

The patient, a male, twenty years of age, and a cigarmaker, was admitted to the Roosevelt Hospital on May 27th, 1889. This deformity, which has been present since birth, increased between the sixth and twelfth years, and although it has not caused much pain, he walked with a curious shuffle of the foot from side to side. He was very desirous of an operation. Examination showed that there was about two-thirds of the normal motion of the ankle joint, and that the neck of the astragalus was twisted so as to look directly inwards, and the os calcis was placed obliquely to the tibia. He had the peculiar pallor of the skin, and mucous membranes, commonly seen in cigarmakers. Heart, lungs, and kidneys, were normal.

On June 5th, cuneiform osteotomy was performed over the greatest convexity of the left foot. The wedge of bone removed consisted of portions of the tibia and fibula, the whole of the astragalus, and enough of the cuboid, scaphoid, and os calcis, to allow of a reduction of the deformity. The foot was placed at once in proper position. Healing was normal, and on July 25th, a similar osteotomy was done upon the other foot. The wedge removed consisted, as in the other foot, of a portion of the tibia and fibula, the whole of the astragalus and scaphoid, and portions of the os calcis and cuboid. On August 24th, union in the left foot was good, and fairly good in the right foot. By the middle of October he was allowed to walk about the wards, and on Nov. 29th, he was discharged from the hospital, and has since been under observation in the Out-Patient Department. The muscles are gaining rapidly in size and strength, under daily applications of electricity. Crutches are only used for long walks, and judging from the progress so far, these can be discarded in a month or two, and possibly in four months even the retentive apparatus, which he now wears, can be removed. Dr. Hartley did not consider this deformity the result of an arrest of develop-

ment, but of pressure effects within the uterus. He believed these cases of secondary congenital club foot could usually be cured by mechanical measures, although the severest forms require, as in the present case, an operation.

Dr. John Ridlon presented a male patient, eighteen years of age, who came under observation last April, for a deformity of both feet, which had made walking difficult and painful for the previous two years. There was cavus and equinus, and on walking, varus of both feet. There were no reflexes on "point pressure." On April 4th, 1889, Dr. George S. Huntington divided the plantar tissues of the right foot by open incision, and having forced the foot into proper position by Thomas' wrench, divided the tendo Achillis subcutaneously. On May 8th, a similar operation was done upon the left foot, and was followed by primary union. The patient is now able to walk well, and without discomfort.

Dr. Ridlon also presented a boy of thirteen years, who first came under his observation on May 12th, 1889, having begun to limp about three months previous. The foot was found to be held rigid in the position of valgus, by contraction of the extensor and peroneal muscles; but when the patient was etherized, with the intention of dividing these tendons, the foot could be easily placed in a position of equino-varus. It was retained in this position by plaster of Paris for about two months. There was no pain following this manipulation and replacement of the foot; and when the plaster was removed, motion at the ankle and tarsal joints was normal, and the limp had disappeared. On October 4th, he was found to have relapsed into his former condition. The foot was placed in the best possible position, and has since then been retained in this position by plaster of Paris.

Dr. V. P. Gibney presented a lady, twenty-five years of age, who had been referred to him in December, 1887. She walked on the outer borders of the feet, where large callosities served as a base of support. The soles of the feet looked backward and upward, and her gait was especially reel-like. There were extensive cicatrices over the tendo Achillis, and it was quite impossible to correct the deformity by manual force.

On December 26th, 1887, a cuneiform osteotomy, after the method of Dr. Charles T. Poore, was performed; but after extensive section of the bones, and free division of the deltoid ligament, and of a few resisting points of the plantar fascia, it was not possible to place the foot in proper position. A free lateral incision was then made, and muscles and tendons divided after the manner of Dr. Phelps. After some further difficulty, a good position was secured, and the foot was placed in a Thomas' club-foot shoe, over which plaster of Paris was applied. The dressings were removed on the following day, on account of free oozing, and by Dec. 30th, it was found absolutely necessary to put her in charge of a trained nurse, and from this time until Feb. 16th she suffnred from septicæmia. At the end of this period, the wounds were healing rapidly, and the foot was in excellent position. On Feb. 22nd, having secured her admission to the Hospital for Ruptured and Crippled, a similar cuneiform osteotomy was done upon the other foot, which was then brought into good position, and dressed antiseptically, and covered with a plaster of Paris bandage. Nearly all the wound healed by first intention, and recovery was uninterrupted, although retarded by the presence of corns and tender callosities. She gets on very well now, although the gait at present is very much modified by the condition of these corns.

DISCUSSION.

Dr. H. W. Berg took exception to Dr. Hartley's statement, that the deformity in his patient was probably caused by too little space in the uterus; he thought this theory had been pretty generally abandoned.

Dr. Hartley replied that he did not think this was the case, as in Bessel-Hagan's book on the Etiology and Pathogenesis of Club Foot, considerable space was given to this very thing.

Dr. N. M. Shaffer had found that a certain number of cases of adult club-foot yielded to mechanical measures; while in many of those which were only amenable to operative treatment, the patient's condition untreated was often as good as that obtained by operation. One great obstacle to the treatment of these cases is the cicatrices from previous operations.

Dr. H. L. Taylor said that a new instrument,

just perfected by Dr. Bradford, of Boston, offered another alternative to methods already in use. By it, the surgeon was able to obtain a very perfect grasp of the foot, and thus twist it into position.

Dr. Samuel Ketch remarked that Dr. Ridlon's second case showed decided reflex spasm and pain on rotation of the foot, and he considered the case one of valgus, symptomatic of some bone lesion. The rapid relapse seemed to favor the view of the osteitic origin of the trouble.

Dr. Berg thought the bone lesion was probably at the point where the outer malleclus impinges upon the astragalus. There was certainly no muscular trouble present.

Dr. Shaffer felt sure there was some bone irritation present, and as it was more resistant to adduction than to the other movements, when the astragalus and scaphoid were crowded together, he thought the lesion was probably located at the articulation between the astragalus and scaphoid, but not involving the ankle joint itself. He had had a similar experience in regard to the sudden disappearance of the deformity after etherization; but he had not suspected a tubercular osteitis, because he had never seen such cases go on to suppuration They are more like inflammatory flat-foot, running a long course, and ultimately terminating not in anchylosis, but in recovery, with pretty good function.

Dr. A. B. Judson was likewise of the opinion that the case was one of articular osteitis, and its duration would favor this view. The circulation of the limb being normal, eliminated the presence of a nervous lesion.

Dr. Ridlon, in closing the discussion on this case, said he could not conceive it possible that a tubercular osteitis could be subjected to such vigorous manipulation without being followed by some evil consequences. When the spasm has existed, the patient has always complained of pain on attempted motion, but he walks and jumps around like other boys. Is it possible that an osteitis can exist for a year, as this has done, under such treatment, without an aggravation of the disease?

Dr. W. R. Townsend presented for Dr. Gibney the left knee of a case of double hip joint disease, which had been removed *post mortem*. The joint had been immobilized in a plaster of Paris splint for eighteen months. There was no disease at the knee when the first plaster had been applied, and the long confinement of the joint showed that no gross changes had occurred in the bones or cartilages. The synovial membrane was removed, and found apparently healthy, and the joint contained a small amount of synovial fluid when first opened. The motions were limited to an arc of about fifteen degrees, and yet, after the ligamentum patellæ was divided, extension and flexion could be made to the full limit. The lateral ligament did not seem contracted.

Dr. Berg said that the specimen only showed that the joint surfaces were normal, but it did not show that the soft parts had not been affected by prolonged immobilization. The specimen was of medico-legal interest, because it was sometimes claimed that real and permanent disability had resulted from such prolonged immobilization.

Dr. Shaffer feared the results of prolonged immobilization, for, in an experience with seven cases of ununited fracture of the femur, it had resulted in effusion into the knee joint. He had employed in these cases an apparatus which made traction upon the thigh, but which was not applied below the knee.

Dr. Ridlon thought we should distinguish between the immobilization of cases of fracture adjacent to joints, and of healthy joints which were p sitively free from any injury, for the results in the two classes of cases were widely different. The traction apparatus employed by Dr. Shaffer might have produced constriction of the limb, and so led indirectly to effusion into the joint.

Dr. Judson said anchylosis was the result of inflammation, and immobilization of an inflamed joint, or the arrest of function was a primary antiphlogistic.

Dr. Hartley said that in fractures in the lower part of the thigh, where there was a possibility of hemorrhage into the joint, passive motion should be begun as soon as possible; but in fractures high up, with very little possibility of injury to the joint, longer immobilization was permissible. It is often very difficult to estimate the amount of injury to a joint at the time of a fracture or other severe injury.

Dr. Taylor said that he never hesitated to immobilize a healthy joint for any length of time that might be necessary, and he had never seen any bad results from it.

Dr. Ridlon described an easy and inexpensive method of producing the flat-foot plate used by Dr. Whitman. The usual method is to have an iron foot made, on which the plates are hammered out. Recalling the copper-plated plaster casts recently exhibited to the Section by Dr. A. M. Phelps, he had taken a plaster of Paris cast to Lovejoy, of 45 Rose Street, who had coated it with a solution of silver, and then, by means of electro-deposition, had obtained a copper plate of the desired thickness, and at a cost of only $1.50. The copper plate so prepared was exhibited.

Hospital Reports.

PARTIAL DISLOCATION OF THE RIGHT ASTRAGALUS FORWARDS.

UNDER THE CARE OF DR. M'PHEDRAN IN THE TORONTO HOSPITAL FOR SICK CHILDREN.

M. B., aet. 10, admitted October 1st, 1888. Four years ago, she fell from a tree, "spraining" her foot; since then she has been unable to walk properly. Her condition on admission to the hospital is as follows:—The foot is inverted, a marked prominence in the instep, where the outline of the partially dislocated astragulus can be clearly made out. The power of flexion and extension is very much restricted; the normal depression below the internal malleolus is wanting. In walking, the heel does not come to the ground, but the girl supports her weight entirely upon the ball of the foot, at the heads of the metatarsal bones.

The malleoli are nearer the sole than they should be; from malleolus to malleolus on the right foot 6 inches, left 5½ inches. There is also some shortening of the foot on affected side, thus: from inner malleolus to end of great toe, right foot, 6 inches, left foot, $6\frac{5}{8}$. From outer malleolus to end of little toe, right foot, 5½ inches, left foot, 6 inches.

Reduction by manipulation was impossible, and it was thought unwise to operate; the child was accordingly sent home.

Books and Pamphlets Received.

Transactions of the Kansas Academy of Science. Vol. xi., 1887-88.

Some complications of Chronic Endarteritis. By Wm. B. Canfield, A.M., M.D., reprint.

The Early Detection of Pulmonary Consumption. By Wm. B. Canfield, A.M., M.D., reprint.

Report of the Section on Practice of Medicine. 1. Relation of dusty occupations to Pulmonary Phthisis. 2. Present aspect of the question as to the etiology of pneumonia. 3. More recent treatment of pulmonary phthisis. By Wm. B. Canfield, reprint.

Book Notices.

A Manual of Organic Materia Medica, being a guide to Materia Medica of the Vegetable and Animal Kingdoms. By John M. Maisch, Ph. M., Phar. D., Professor in the Philadelphia College of Pharmacy. Philadelphia: Lea Brothers & Co.

There is but slight change in the 4th edition of this well-known and standard text-book. Whilst the work is of but little use to the medical practitioner, druggists and pharmacists will appreciate it.

Manual of Skin Diseases, with special reference to Diagnosis and Treatment; for the use of students and general practitioners. By W. A. Hardaway, M.D., Professor of Skin Diseases in the Missouri Medical College, etc. St. Louis: Theo. F. Lange.

The diseases of the skin are considered in alphabetical order; a great sacrifice for the sake of a little convenience of reference. The descriptions are accurate, and form very good word pictures; the treatment is summed up as briefly as possible. The author does not hesitate to give his own opinion, as well as those of the standard authorities. We venture the opinion that this will become a favorite text-book for students.

Text-book of Medical Chemistry for Medical and Pharmaceutical Students. By E. H. Bartley, B.S., M.D., 2nd edition. Philadelphia: Blakiston & Co.

The author, in some 370 pages, covers the ordinary range of inorganic and organic chemistry, poisons, their antidotes, and treatment, and

the analysis of urine. It is to be feared that any student, who contented himself with this work alone, would pass a *mauvais quart d'heure* with the examiner at the College of Physicians and Surgeons.

A Manual of Obstetrics. By A. F. A. King, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Columbian University, Washington, etc. Fourth Edition. Philadelphia: Lea Brothers & Co.

This book has become quite popular in the United States as a manual for students, but we cannot recommend it, because we think there are better text-books available. Dr. King is an able obstetrician, a successful teacher, and a good writer, but we have to regret that his work is too brief to give students an intelligent idea of this important subject. It is only fair to add, however, that the book has the endorsation of many eminent teachers of midwifery.

Annual of the Universal Medical Sciences. A Yearly Report of the Progress of the General Sanitary Sciences throughout the world. Edited by Charles E. Sajous, M.D., Lecturer on Laryngology and Rhinology in Jefferson Medical College, and seventy associate editors. Volume II.; F. A. Davis, Publisher, Philadelphia, New York and London.

This volume contains the following monographs: Diseases of Brain and Spinal Cord, by Drs. Seguin and Birdsall, of New York; Peripheral Nervous Diseases and General Neurosis, by Dr. Henry Hun, of Albany; Mental Diseases, by Dr. Brush, of Philadelphia; Inebriety, Morphinism, and Kindred Diseases, by Dr. Birdsall, of New York; Diseases of the Uterus, Peritoneum, and Pelvic Connective Tissue, Disorders of Menstruation, by Drs. Munde and Wells, of New York; Diseases of the Ovaries and Tubes, by Dr. Goodell, of Philadelphia; Diseases of the Vagina and External Genitals, by Dr. Parish, of Philadelphia; Diseases of Pregnancy, by Dr. Parvin, of Philadelphia; Obstetrics, by Dr. Richardson, of Boston; Diseases of the Newborn, by Dr. Currier, of New York; Dietetics of Infancy and Childhood, by Drs. Starr and Powell of Philadelphia; Growth and Age, by Dr. Minot, of Boston. The names of the various authors will furnish the best possible guarantee of the excellence of the different chapters.

The National Medical Dictionary; including English, French, German, Italian, and Latin technical terms, used in medicine and the collateral sciences, and a series of tables of useful data. By John S. Billings, A.M., M.D., L.L.D. Edin. and Harv., D.C.L., Oxon. With the collaboration of W. D. Alivater, M.D., Frank Baker, M.D., S. M. Burnett, M.D., W. T. Councilman, M.D., Jas. M. Flint, M.D., J. A. Kiddie, M.D., Wm. Lee, M.D., R Lorini, M.D., Washington Matthews, M.D., C. S. Minot, M.D., H. C. Yarrow, M.D., in two volumes. Philadelphia: Lea Brothers & Co.

It is generally considered a difficult task to review a dictionary, but it is certainly a very pleasant duty to say a good word for Billings' new work. The name of the author would naturally lead us to expect something past the ordinary, and a careful examination of the two volumes will, we feel certain, convince any one that all expectations have been fully realized. The work was really needed. Dunglison's dictionary, an excellent book in its day, is wholly insufficient for our present requirements. Two other dictionaries, fairly well known to the profession, are scarcely up to the mark. The large work in preparation, under the supervision of Foster, is slow in appearing, only one volume having been published.

The total number of words and phrases defined in Billings' dictionary is 84,844, of which 25,496 are Latin, 9,158 French, 16,708 German, and 6,514 Italian. In the first volume there is a series of tables of doses, of antidotes in the most common forms of poisoning, of thermometric scales, etc., which will prove useful to general practitioners. We have much pleasure in recommending the work on its merits. We believe no physician, pretending to have a library, should fail to obtain it.

Personal.

Dr. Cooke, Toronto, has removed to 202 Simcoe street.

Dr. Osler, of Johns Hopkins, Baltimore, was in Toronto, March 11 and 12.

Dr. R. S. Black, formerly of Halifax, now of Ontario, California, has lately had an apoplectic seizure.

Births, Marriages and Deaths.

BIRTH.

SPOHN—At Penetanguishene, on Tuesday, March 4, the wife of Dr. P. H. Spohn, of a daughter.

DEATH.

GRANT—At Gravenhurst, on the 2nd March, D. J. Grant, M.D., aged 54 years.

Miscellaneous.

A NEW CREMATORY AT TROY.—There have been twelve crematories erected in the United States. The last built, is the Earl Crematory, Oakwood cemetery, Troy, New York, and is said to be the most elaborate structure of its kind in the world, having a chapel and a lofty tower, in addition to the furnaces. Two bodies have been incinerated there. The crematory, with the chapel, were presented to Oakwood cemetery by the friends of the late Mr. Gardner Earl.

P. Blackiston, Son & Co., Philadelphia, will publish, about March 15th, a new Medical Dictionary, by George M. Gould, A.B., M.D. It will be a compact one volume book, containing several thousand new words and definitions, collected from recent medical literature, while the total number of words is beyond that in any similar book. It includes also elaborate and useful tables of the bacilli, leucomaines, ptomaines, micrococci, etc., of the arteries, nerves, etc., and of the mineral springs of the U.S., together with other collateral information.

RECENT SAVING OF LIFE IN MICHIGAN.—In a carefully prepared paper, read before the Sanitary Convention at Vicksburg, the proceedings of which are just published, Dr. Baker gave official statistics and evidence which he summarized as follows :—"The record of the great saving of human life and health in Michigan in recent years is one to which, it seems to me, the State and local boards of health in Michigan can justly 'point with pride.' It is a record of the saving of over one hundred lives per year from small-pox, four hundred lives per year saved from death by scarlet fever, and nearly six hundred lives per year saved from death by diphtheria an aggregate of eleven hundred lives per year, or three lives per day saved from these three diseases! This is a record which we ask to have examined, and which we are willing to have compared with that of the man who 'made two blades of grass grow where only one grew before.'"

DOCTORS' STORIES.—The *North American Practitioner*, Chicago, speaks as follows: Recreation is ever to be enjoined, but there seems to be a disposition among physicians to drop from a condition of constraint to one of unbridled liberty. Almost every one has heard, at least in our city, the most inelegant, if not positively obscene speeches at the banquets of medical men. Even in the lecture-room, it is reported that certain professors garnish their science with questionable anecdotes. It seems to us a sad comment on our profession that such a condition of affairs exists. Are there not enough objects of common interest to furnish postprandial topics of debate? Has the profession of medicine no local history to embellish, no *penates* to set up, no noble sentiments to cherish, that such a display of poor humanity should be dangled in our faces? Why should a medical man ever give utterance to a sentence which he would blush to hear his son repeat? Gentlemen, these things ought not so to be.

MEDICINE AND THE ARTS.—Every now and again comes a cheerful reminder that the pursuit of medicine does not destroy artistic perceptions, even though it is currently held that devotion to any science tends to develop the "scientific frame of mind" until it is all-absorbing. Those who have had no scientific training never seem to weary in denouncing the avidity for facts and the scepticism for theories with which they credit those whose habit of thought differs in many respects from their own. The medical profession in particular is selected for cheap satire. The interest of the dissecting-room and physiological laboratory and the watchful anxiety bestowed upon hospital patients are alike misunderstood by many who have never penetrated the inner life of the medical man. To those who know, however, there is a deal of human nature in the medical profession, and it seeks expression and distraction in many unsuspected directions. Painters, etchers, and photographers abound in our ranks, while music not only claims many

instrumentalists, but even the publication devoted to Wagner and all things Wagnerian is edited by a member of our profession.—*Lancet.*

INVITATION FOR AN INTERNATIONAL MEDICAL AND SCIENTIFIC EXHIBITION.—In connection with the Tenth International Medical Congress to be held in Berlin, between the Fourth and Tenth of August, there is to be an International Medical and Scientific Exhibition. The exhibits will be of an exclusively scientific nature, as follows :

New or improved scientific instruments and apparatuses for biological and strictly medical purposes, inclusive of apparatuses for photography and spectral analysis, as far as applicable to medicine.

New objects and preparations in pharmacological chemistry and pharmacy.

New foods.

New or improved instruments subservient to any of the departments of medicine, including electrotherapy.

New plans and models for hospitals, convalescent homes, and disinfecting and bathing institutions and apparatuses.

New arrangements for nursing, including transportation, baths, etc.

New apparatus in hygiene.

Applications or inquiries inscribed "Ausstellungs-Angelegenheit," and accompanied with a printed card containing the name and address of the firm thus applying, ought to be directed to the Secretary General, Dr. O. Lassar, Carlstrasse, No. 19, Berlin, N. W., Germany.

R. VIRCHOW, President.

AN UNTOWARD EFFECT OF SULFONAL.—As yet no well authenticated case of death following its use has been reported. Owing to this absence of directly traceable and immediate injuriousness, sulfonal has been recommended as an ideal hypnotic, having none of the after-effects of other remedies of this class. This is not the case, for in predisposed persons, it gives rise to untoward results, the same as other hypnotics. The fact that when it fails to produce sleep, a decided loss of equilibrium and a marked sensation of drunkenness is felt, ought to put us on guard as to its promiscuous and prolonged use. In various instances it has seemed to me that sulfonal had a peculiarly dulling influence upon the mind, in those already suffering from mental trouble. My suspicion became a certainty when the following case came to my knowledge : A gentleman of 43, of nervous temperament, had been troubled with various symptoms of neurasthenia, precipitated by heavy losses in business. For over two years insomnia was one of the complications, for which sulfonal was used with the most gratifying effect. While drifting, like the typical neurasthenic, from doctor to doctor, he remained true to his sulfonal, which he took at a dose of 30 grains, originally prescribed for him. In the last five months he is said to have used more than 10 ounces. More than four months ago his family noticed a peculiar change in his manner, manifesting itself under the form of apathy and listlessness. He would answer questions put to him after marked and painful delay, as if comprehension was labored and unnaturally slow. Things and persons in whom he had formerly taken the keenest interest, became indifferent to him. He made mistakes in his books, which it took him a long time to discover; the computation of sums, formerly almost a matter of play to him, became laborious, and was at times impossible ; naturally punctual in his affairs, he forgot his engagements ; in short, his memory and judging power became visibly impaired, so that his partner suspected beginning softening of the brain, and insisted on an examination. During all this time the patient himself had no idea of his mental state, but did not show any surprise at the suggestion to withdraw temporarily from business and undergo a course of medical treatment. An examination revealed the facts detailed above, and especially the abuse of sulfonal, of which the family were cognizant without suspecting any deleterious action on the patient's mind. One week after the cessation of the drug, the first signs of mental improvement set in, marked by the declaration of the patient that he felt like awakening from a long sleep. After this, the recovery was very rapid, there being a perfect realization on his part as to the danger he had passed through. His memory and reasoning powers are apparently absolutely normal; so his friends assert.—*L. Bremer, i St. Louis Courier of Medicine.*

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, APRIL 1, 1890.

Original Communications.

THE TREATMENT OF PNEUMONIA.*

BY A. MCPHEDRAN, M.B.,

Lecturer on Clinical Medicine in the University of Toronto.

We have had so many cases of this disease under our observation lately, that I think it well to direct your attention connectedly to the general principles of treatment.

The therapeutics of no disease has given rise to more controversy than that of pneumonia. Formerly, the disease was looked upon as simply an inflammation of the lung, and was treated as other inflammations were treated, viz., by bleeding. About the middle of the century, bleeding was rapidly given up, and treatment by stimulants—often in enormous quantities—was adopted. During this time, the natural history of the disease not being known, recovery was attributed to the treatment adopted, and nature received little credit. Later, observations were made on the natural course of the disease when left to itself, and it was found that, in young and fairly healthy persons, its tendency was to recovery; that its dangers had been greatly exaggerated, and that the worst cases were usually little affected in their progress by bleeding, or alcohol, or the many other like plans that had been adopted. These observations led to the adoption of the so-called expectant plan of treatment, which consists in mitigating symptoms as far as possible, sustaining the strength so that the patient may be able to bear up under the disease, and be in the best possible condition to recover his health as soon as the disease shall have run its course. This, you see, is just what we try to do in enteric fever, measles, etc. This plan of treatment accords too with the opinions now held by the majority of pathologists, that pneumonia is an essential fever, due to specific micro-organisms, of several varieties probably, and that the lesion in the lung is but a local expression of the disease, just as the ulcers in the bowel are of typhoid fever. If an essential fever, it would be of little use to try to abort the disease; anything that would destroy the germs, would injure or destroy the patient also. The late Sir William Gull was not far astray when he remarked that he "knew of no remedy for pneumonia, and that the best method of treatment was to send the patient to a warm bed" No one plan of treatment will suit all cases; we must treat the patient rather than the disease. If he has pain, relieve it; if the temperature is dangerously high, reduce it; if the pulse is strong, full, and bounding, quiet it: if weak, and showing signs of heart failure, stimulate it. There is much to be done, you see; there are few things that will try your judgment more than the judicious treatment of a severe case of pneumonia.

In all cases, absolute confinement to bed from the first, in an airy room, of a temperature of about 65°F., air slightly moist, plenty of easily-assimilated food, mostly liquid, without over-feeding, and good nursing, are indispensa-

*A Clinical Lecture delivered at the Toronto General Hospital.

ble. The bowels should be well evacuated by any mild purgative, as castor oil, or calomel alone, or followed by a saline. To promote elimination by the kidneys and skin, potass. citr. and liq. ammon. acet. may be given with advantage, for, you know, that in all acute diseases, the symptoms are, in a large measure, due to the waste products in the blood. To maintain uniform warmth and prevent chilling, the chest may be wrapped in cotton-wool, covered with flannel. This is much more convenient than poultices, and with mustard or turpentine applied over the seat of pain, does all the good that poultices do, and none of the harm that the latter may do if not well managed. Mild cases of pneumonia require nothing more to be done for them than this. You have seen several such cases lately, and these charts of their temperature, pulse, and respiration, are quite familiar to you.

Severe cases will demand more active interference. We seldom see the patient till after the chill. If a robust man, we may find him with a full, bounding, rapid pulse, showing high arterial tension; with a high temperature, flushed face, and rapid breathing. This is the kind of case in which bleeding gives prompt relief, lowering the temperature, softening and slowing the pulse, quieting the breathing, and easing the pain; apparently, doing all that we could desire for the patient. But he is not cured: in fact, it has not been shown that the course of the disease is either rendered milder or shortened, or the extension of the inflammation in the lung limited, by the bleeding. Then we must remember that pneumonia causes rapid deterioration in the quality of the blood—the patient soon shows signs of anæmia; in view of this, it would seem very undesirable to rob him of any of his blood, which is destroyed by the disease much more rapidly than he can make it. If the patient's condition demands it, there are other means by which we can reduce the high arterial tension, without depriving him of any of his blood, viz., by the administration of a cardiac depressant, as aconite, or veratrum viride; the latter, which is probably the better, is strongly recommended by H. C. Wood. To understand how they benefit the patient, you must remember that while the vessels generally are in a state of high tension, the vessels the inflamed portion of lung are greatly dilated, their walls being completely paralysed by the inflammatory process. The blood is, therefore, forced into them until they become gorged, and the circulation through them almost arrested. To be of benefit, these depressants must, therefore, be given early, to limit as far as possible this engorgement of the inflamed lung. If given, the dose should be sufficient to soften the pulse, and keep it so during the first stage; probably, only during the early part of the first stage. Very few of the cases met with in this city are sufficiently sthenic to call for either bleeding or such depressants as veratrum viride. There has not been one among the fair number we have had in the hospital this year. Such cases are more frequently met with in country practice.

As you are all aware, the chief danger to the patient with pneumonia is from heart failure; or, to be more exact, from failure of the right ventricle; occasionally, also, from congestion of the unaffected parts of the lungs, due to weakness of the heart. To appreciate the danger from heart failure, you must remember that the channel of communication between the right and left ventricles is through the lungs. If, for example, the lower lobe of one lung be consolidated, this channel will be reduced to three-fourths of its dimensions; if a whole lung be affected, or the lower lobes of both lungs, as in the patient in Ward 9, there is only half the channel left, and the work of the right ventricle, in maintaining the circulation through the lungs, will be increased proportionately. This, however, does not account for the whole of the increased labor of the heart. The æration of the blood will be less perfect in proportion to the extent of the pulmonary disease, and, as in all acute diseases, the waste products in the blood are increased. Now, you know that the less pure the blood is, the more difficult is it for the heart to maintain the circulation; the presence of the CO_2, and the waste products, will add materially to the difficulty the heart has to contend with. At the same time its own tissues, in common with the tissues generally, are less perfectly nourished, partly on account of the impurities in the blood, but chiefly on account of the weakness of the circulation. At first its efforts are equal to the

increased labor, and a perfect circulation is maintained; soon, however, the strain becomes too great, and its contractions become excited and imperfect—it fails to empty itself completely at each systole. This condition increases, and the action of the heart becomes irregular. In such a state, the patient is liable to succumb at any moment from arrest of the heart in diastole, or by more gradual failure of the heart, aided usually by congestion of the unaffected parts of the lungs. To prevent such heart failure, or if failure has already set in, to restore the heart's power, so as to enable it to again effectively carry on the circulation, is the chief object of treatment in all severe cases of pneumonia. How can this best be done? This is best answered, I think, by reviewing the treatment carried out in the case of the girl in Ward 9, whom you have observed daily since she entered the hospital. She is 14 years old; has always been fairly healthy. One brother died of pneumonia, a week before she came here, and two of phthisis, within the last three years. Not a very cheering family history, certainly. Her home surroundings have been anything but healthy. When she came here the base of the lower lobe, and most of the middle lobe of the right lung, were hepatized; in a day or two the whole of the lower lobe of the left lung, also the part of the upper lobe overlapping the heart and great vessels, became consolidated. This chart shows well the state of the temperature, pulse, and respiration, and will remind you of her condition. The pulse soon showed signs of failure, becoming weak and irregular; the respiration often reached 60 to the minute; she was restless, sleepless, and showed well marked *subsultus*. Her condition showed imminent danger from failure of the right ventricle. She was ordered tr. digitalis ℥ss., with liq. strychniæ mv., to be repeated every six hours, until the pulse showed that the heart responded to its action. She took three doses a day two or three times; usually, only a dose morning and evening, and sometimes only one dose per day—the quality of the pulse being constantly taken as the guide to its administration. Alcohol was given also, to act as a general stimulant, and to prevent the heart from becoming too slow under the effect of the digitalis. The strychnine was added as being an excellent respiratory, as well as cardiac, stimulant. Her chest was encased in a layer of cotton wool, and over that, flannel, the whole fitting snugly and fixed over the shoulders. Poultices were not used because, in the first place, there was no pain, and, in the next place, because they do little good. They are cumbersome, tire the patient in changing them, and are not more useful than the cotton wool.

There was scarcely any cough; there was some diarrhœa, but not enough to call for interference. Milk was given every two hours as nourishment.

The heart responded to the digitalis, as shown by the fuller and slower pulse. The delirium soon disappeared, as did also the subsultus; she rested and slept better. Her condition was critical for several days, and, as shown by the chart, the fever continued much longer than it does usually in pneumonia, and its termination, though rapid, was not by crisis, doubtless on account of repeated invasion of fresh portions of lung.

In heart failure, from any cause, digitalis is our most effective remedy to restore the heart's power; but it must be given in full doses—full enough to give unmistakable evidence in the pulse, no matter how much is required. It causes the heart to contract more slowly and forcibly, emptying the right ventricle more completely. This gives the left ventricle a fuller supply, and also the arteries, as shown by the pulse; unless you get this effect on the pulse, a fuller and stronger one, your dose has been too small, and does little, if any, good. I have often seen 5, 10 and 15 min. doses given, but cannot recollect ever having seen any appreciable benefit result. Large doses given twice a day will do much more good than the same quantity in the same time in small and frequently repeated doses. The large dose, if the heart responds, will cause a complete contraction of the ventricles, and cause the pulse to come up fuller and stronger. This means not only that the heart itself, but also the nerve centres and tissues generally will receive a fuller supply of blood; therefore, their nutrition and ability for work will be proportionately improved; there will be better sleep, less delirium, larger capacity for nourishment, and increased eliminations by the kidneys. You cannot get

such results from the frequent administration of small doses, because one dose will be partially eliminated before the next is given. This is but repeating much of what I have often said about the use of digitalis in heart disease; in which, as in pneumonia, our object is to enable the heart to cope successfully with work before which it was giving way. But you must remember that in febrile states the heart responds less readily to digitalis, and therefore fuller doses must be given. The effect of each dose should be noted before a second is given. This will require care, and should not be entrusted to any one unable to judge of the character of the pulse.

Unfortunately, in some cases of pneumonia, the heart does not respond to the largest doses of digitalis. I lost one such case a short time ago. Other stimulants must then be depended on.

Ammonia and Sp. Ætheris Co. are useful stimulants when prostration is marked. To get the full benefit of their use, they must be given *frequently*, as their effect passes off quickly.

Alcohol is given very generally. Fagge says that few over forty can get well without it, and that it should be given to bad cases at all ages. It is quite unnecessary in mild cases under middle age, and should not be given to the old, because they are old, but only when indicated by the appearance of prostration. An old woman in Ward 10, who gives her age as 85, has just recovered, you know, from a mild attack, without any stimulants of any kind—she did not require any. Alcohol should, however, be given freely in marked prostration and its effect watched.

All these stimulants act on the system generally; they have no special effect on the heart, and are, therefore, much less effective in counteracting heart failure than digitalis.

If, notwithstanding the administration of such general and cardiac stimulants, cyanosis appears with signs of pulmonary congestion and failure of the right ventricle, the abstraction of six to ten ounces of blood from the arm may give such relief to the laboring right ventricle as to enable it to recover itself, and re-establish an effective circulation.

Much more might be said on this subject were there time. My object has been to point out to you what I believed the best plan of treating pneumonia, with the reasons therefor. I hope I have made it plain to you why the great object must be to maintain the circulation. By all means avoid giving expectorants in pneumonia as a matter of routine, they injure the stomach without doing any good to the lungs.

TREATMENT OF NEUROSES.*

BY E. C. SEGUIN, M.D.

In the intervals between the paroxysms of migraine, dietetic measures should be used to correct the gouty and lithæmic diathesis.

Few theories are so injurious in their results as the one that migraine is due to indigestion. This theory finds apparent support in the vomiting of food, and of bilious material. This vomiting is a result, not the cause of the migraine. The presence of the sour bilious material is simply due to the prolonged muscular effort of the act of vomiting.

As has been pointed out by Weir Mitchell, and Stevens, many cases of migraine are due to some ocular defect. I have never seen a case of migraine in which there was not ocular defect, either error of refraction or muscular weakness, particularly of the external recti. In this relationship to ocular defect lies the explanation of the influence of heredity, and of the fact that migraine disappears between the ages of 40 and 50, the period when the powers of accommodation fail.

Cannabis indica and atropine should be administered in large doses. The mydriatics act by paralyzing the third nerve, and thus relieving the strain on the ciliary and internal recti muscles. A good reliable extract of cannabis indica, either Hering's or Squibb's, should be used. The same preparation should be used in every case, so as to secure reliability as to the strength of the dose. Cannabis indica gr. $\frac{1}{6}$, arsenious acid gr. $\frac{1}{60}$, may be given in pill form before meals. This dose should be increased by $\frac{1}{6}$ of a grain each week, until the patient does not quite reach the stage of semi-drowsiness and dreaminess. In women the maximum dose is from $\frac{1}{3}$ to $\frac{1}{2}$ grain. This

*Abstract of Lecture delivered before the University of Toronto Medical Society.

treatment should be continued for a year or longer.

During the paroxysm, the routine treatment should be temporarily discontinued, and the patient placed in a quiet and darkened room. Morphia should never, on any consideration, be given. Antipyrin may be given in doses of gr. xv.-xx. to a woman, grs. xx.-xxx. to a man. If there be any cardiac weakness, digitalis may be combined with it. Antipyrin is the most useful drug we have, but may lose its effect. Pure caffein, not the citrate, may be given in doses of gr. ½ every quarter hour, until the pain has ceased, or five doses have been taken. There is nothing to be gained by giving larger doses. This drug often gives striking relief in cases in which optic auræ, such as hemianopia, or hemichromanopsia, are marked. Both antipyrin and caffein should be given, if possible, before the attack, and as soon as the premonitory symptoms come on. It is true that caffein may produce an excited, tremulous condition, but this is to be preferred to migraine.

Guarana I have found very unreliable. Nitrite of amyl is, in my experience, valueless. It does not cut short the attack, and it often causes great distress. The hypodermic injection of hyoscyamia gr. $\frac{1}{50}$, for several hours, often gives good results, and never leads to the formation of a habit. Strong café noir may, in some cases, be efficacious. Cold, heat, menthol, electricity, may be tried. Every therapeutical agent may be tried except morphia.

There is no hard and fast rule as to whether it is better to give up to an attack or not. Each case must be considered on its merits. Strong men may keep up and about; most women do best to retire at once to a quiet, dark room.

As I have said, migraine tends to cease spontaneously between the ages of forty and fifty; often, however, it passes into a constant headache, usually occipital, of unexplained origin, and very stubborn and difficult to relieve.

In cases in which there is general paræsthesia about the head, patient is worse on the street, at the theatre, etc., and has a "fear of places," there are besides errors of refraction, also weakness of the external recti, and general nervousness. In such cases there are sometimes hysteroid attacks. These patients should be given mydriatics, and treated with prisms, or by division of tendons.

No problem in medicine is so difficult as the pathology and treatment of headache. A case of simple headache should never be prescribed for off-hand at the first visit. Palliative treatment may be prescribed at once, but curative only after several visits, when the case has been thoroughly studied. Headache is sometimes relieved by strong black coffee. Caffein is better, because it is less bulky and can be carried about. I may be pardoned if I here digress and speak of the use of coffee in fermentative dyspepsia. The first advice often given to dyspeptics is to give up tea and coffee. This is a mistake. Good strong coffee, without milk, cream or sugar in it, cannot but do good. It is a cardiac tonic, a nerve sedative, and a diuretic. The coffee should be made without boiling, to avoid tannin. In some cases of neurasthenia, in which there is marked morning depression, I give the patient, before he rises, a good cup of café noir, and two grains of quinine. I then have him take a brisk cold bath, and rub well, and go down to breakfast. The result is that he feels vigorous and high-spirited.

Trigeminal neuralgia, or tic doloreux, is either symptomatic or idiopathic. When idiopathic, it is often of many years duration. Surgical treatment, by exsection of nerves or of Meckel's ganglion, is usually followed by relapse. During the last thirteen years, I have cured many cases by the use of Duquesnel's crystallized aconitia. I administer it in a pill, containing $\frac{1}{200}$ of a grain, and use for this purpose the preparations of McKessin and Robbins, or of Schieffelin. Once or twice a year, I test these pills on my own person, in order to be sure that the preparation is of standard virtues. Two pills cause, in me, tingling, chilliness, faintness, and nausea. The whole body is numb, but there are no motor or mental symptoms. Aconitia should be given until we get the above mentioned sensory symptoms. If there is no idiosyncrasy, push the drug. If you wish to succeed, you must give it to the fullest extent. Women should be given small doses at first, as $\frac{1}{400}$ gr. has caused toxic symptoms. Proceed with "cautious temerity." They should commence with one pill twice a day; men with one pill thrice daily; increase, if necessary, to 12 or 14 pills a day.

For several weeks after the pain has ceased, two pills should be taken three or four times a day. On the least return of pain, the large dose should be resumed.

Even when there is no syphilis, a course every second month of the red iodide of mercury, $\frac{1}{20}$ to $\frac{1}{6}$ gr., or the iodide of potassium, 20 to 45 gr., largely diluted, after meals, may be of great use. The patient should be given an abundance of nutritious food, cod liver oil, cream, rich milk, eggs. A little brandy or whisky may be given with the milk. Patients often run down because the pain of eating causes them to refrain from food.

In exophthalmic goitre, I have had good results from the systematic administration of aconitia, 3 to 8 pills a day. I also bandage the protruding eyeballs. I put on a carefully moulded pad of cotton over the eyes. Put on two or three turns of a flannel bandage, using gentle but firm pressure. The pressure should not be too great. The bandage should be left on two hours per day. The physician himself should apply the bandage. At the same time, potassium iodide, iron, and cod liver oil, may be given.

If the diet of the neurotic patient is inquired into, it is almost always found that they dislike fats, eat an excessive amount of the hydrocarbons, drink very little water, and that some of them are never thirsty. The urine is usually of high specific gravity, and contains an excess of uric acid or oxalates. Excessive use of alcohol, rice and starches, give rise to multiple neuritis. This effect of rice is seen in the diseases of the east beri-beri and kakké-kakké. If excess of this kind of food gives rise to gross nervous lesions, is it not rational to think that they will be contra-indicated in the neuroses, for they can only give rise to malnutrition of nerves?

The patient should drink, at least, 3 pints of water daily. He may use apollinaris, or Buffalo lithia, or any other non-purgating water. Let him take a tumblerful three or four hours after meals. He must be made to eat fat food, although there will be considerable difficulty in effecting this. The dislike to fat food is often the result of bad example in early life, the patient having been pampered into the belief that this or that food disagreed with him. He should be made to take fat beef or pork, cod liver oil, butter, and cream.

Cod liver oil I always prescribe pure, avoiding all emulsions. Ninety-nine out of a hundred cases can take cod liver oil, if they will but persevere. I never give it with brandy, unless the liquor is indicated for some other purpose. It may be administered floating on ice water, or with chocolate, or lemon juice. Fat pork is a fair substitute for cod liver oil. I cause my patients to get a square of salt side meat, thick and fat. When this has been boiled, it is kept cool in an ice box, carved very thin, seasoned well, and eaten with a thin slice of bread. I find that patients get very fond of this pork sandwich.

The amount of starchy and sweet foods must be reduced. Bad breakfasts are especially to be avoided. I interdict porridge, grits, and reduce the quantity of bread and potatoes, and cause them to eat meat, poultry, eggs. I never allow them to eat oranges before breakfast, for according to physiological laws, the secretion of gastric juice must be thereby diminished. The only physiological preliminary to breakfast is a glass of cold water; if the patient be dyspeptic, it may be hot.

The question is often asked: "What shall I eat with my meat?" Spinach, lettuce, cabbage, beans, onions, asparagus, and other green vegetables, may be eaten. Most of them digest better when raw than when cooked. Peas and corn may be used, but only in small quantities. I enter into a compact with my young lady patients that they may use pickles, if they will give up candy. Meats should be boiled, roasted, or quickly fried. Stimulants are usually injurious. In a few cases half an ounce of brandy, or a glass of good claret, may be allowed with meals. After careful study of the individual, and of the case, a written diet table should be made out for each patient. Unless in very strong patients, milk should not be given with solid food. A glass, to which a little common salt or bicarbonate of soda has been added, may be taken between meals or at bedtime.

In epileptics the evening meal should be light, and they should never eat just before going to bed.

Phosphorus may be administered in Thompson's solution, one drachm of which is equiva-

lent to $\frac{1}{20}$ grain. I have found this very serviceable in neuralgia, especially in recent cases of tic doloreux, in which, when it is given in drachm doses every three hours, relief is had in three or four days. The phosphorated oil and pills of phosphorus should be given after meals. In my experience, phosphoric acid, the hypophosphites, and hypophosphates, have been of very little use.

It is not necessary that tobacco should be interdicted. A patient may be allowed to smoke one mild cigar daily. I have had some patients, non-smokers, who suffered greatly from the clouds of tobacco smoke in the club-rooms which they resorted to.

Sexual intercourse, and marriage, should never be advised as a remedy in the neuroses. Continence does not cause nervous symptoms, save in the highly imaginative. On married patients I enjoin moderation, two or three times a month. Ungratified sexual excitement is highly injurious. I, therefore, order the patient to occupy a separate bed.

In chorea, hysteria, and neurasthenia, absolute rest is invaluable. Isolation, as practised by Weir Mitchell, is in many cases the only thing which will relieve.

In other neuroses partial rest is desirable. I direct my patients, once or twice a day, to retire for an hour or two to a quiet room, to lie down and sleep, or occupy their minds with pleasant thoughts. Let them think of the time when they will be cured. Teach them to ignore paræsthesiæ. Let them indulge in cheerful conversation. If the patient lives in a small house, so that she cannot retire to a private room, let her send the children away or go on a visit to some friend.

Hysterical cases simulating serious disease are often speedily cured by seclusion, the parents and friends being rigidly excluded from the room. A little girl of 13, the daughter of a physician, complained of intense pain in the forearm and hand; the pain was not referred to the distribution of any particular nerve. The child's mother was a victim of various neuroses; the father had been compelled to give up his practice, in order to attend to his wife. I found the child attended by a special nurse, visited by sympathizing playmates, the room filled with flowers, and other gifts of friends. After some effort I persuaded the father to send away the nurse, to prevent any friends, relatives, or playmates, entering the child's room, to intercept flowers and gifts. Not even the servant was allowed to stay in the room, or to ask the child any questions. Her meals were put on a table by her side, and she was left to feed herself. In less than twenty-four hours the child cried out to the servant that her arm was better.

I have great faith in the judicious application of cold water. In neurasthenia, I cause local cold packs to be applied for a half hour to the epigastric region and to the genitals. During the application of the cold douche, the head should be protected by a rubber cap. The water should be dashed on with considerable force, for from five to ten seconds. If there is not a tap available, the water may be thrown from an ordinary cup. With the cold bath, I cause the patient to stand naked, in a warm room, and throw a wet sheet over his shoulders, with which he is rubbed vigorously for two or three minutes. He is then dried, laid on a sofa, wrapped in a blanket, and has massage for 30 to 40 minutes; not longer. In weak patients, the massage is limited to 14 to 15 minutes.

The simple cold sponge-bath should be taken at bedtime, and should not last for more than two minutes. The patient should be well rubbed after the bath. The cold foot-bath for a few minutes, followed by brisk rubbing, is useful in cerebral neurasthenia.

I this connection, I may say that burning extremities are relieved by a short douche, twice a day, of the hottest water that can be borne. Cold extremities are cured by a cold bath for one or two minutes, or by a hard rub, under very cold water, twice a day for two weeks. There is no relief obtained during the first few days. I believe that habitual coldness of the feet is often due to the wearing of woollen socks, which cause perspiration. This perspiration is prevented by the shoes from evaporating, and thus the feet are kept constantly damp and cold. Let such patients wear thread or light cotton hose.

Profuse menstruation, by producing anæmia, is often injurious in neurasthenic cases. To prevent this, I order very hot vaginal injections, to be taken on the third day of the flow.

Neurasthenic patients require more exercise than that resulting from their occupations. There should be systematic use of certain muscles, with a definite object in view. Most such female patients never leave the house from tea time of one day until the afternoon of the next, and are thus cooped up for from twelve to eighteen hours. I, therefore, order them to take a walk immediately after breakfast, merely that they may get some fresh air. Walking is desirable, except in severe uterine or ovarian diseases. They should walk far enough to be slightly fatigued, but not exhausted. Some broth or milk should be taken on coming in, and the patient should lie down for half an hour.

Night and morning the patient should take six or eight forcible inspirations. He should be undressed, standing up, mouth wide open, the closed fists resting on the chest. He should take a deep inspiration, at the same time extending the arms. Systematic gymnastic exercise may be useful, provided it is given under good medical instructors. You should specify in writing what exercises you wish the patient to get.

When patients are unable to leave their rooms, we should cover them well, put on a cap, and open the window. A very good plan is to make the patient sit up, and be dressed as if for going out, and open the window for a half hour or longer. The temperature of the room should never be allowed to go beyond 68°F. These patients are very apt to live in an overheated atmosphere. The constant application of hot bottles to the feet is injurious, as it lessens resistance. In cases of insomnia, a prolonged hot bath at bedtime is often useful.

Alcoholic stimulants tend to weaken the powers of resistance, especially where there is weakness of cardiac or of vaso-motor nerves. Physicians' prescriptions often send patients down the inclined plane of chronic alcoholism. The diagnosis of chronic alcoholism is difficult, especially in women. A good nurse, with tact and shrewdness, will here be a great aid to you. Prescribe alcohol only on the clearest indications, and in stated quantities; give it up as early as possible. In cases of simple emaciation, claret may be given with meals. In gouty and lithæmic subjects, where alcohol is indicated, whisky or gin may be used.

Morphia, and the preparations of opium, are useless in the neuroses. They actually aggravate migraine, hysteria, and neurasthenia. Morphia should never be given in chronic habitual cephalalgia. It may be given for the pains of tabes dorsalis, only when the chloral and sulphonal fail.

In hysteria, morphia should not be used. The peculiar insusceptibility of hysterical patients to morphine should always be borne in mind. Give, instead of it, hyoscyamia gr. $\frac{1}{100}$ to $\frac{1}{50}$, by hypodermic injection. Its effect is just as speedy, and there is no danger of the formation of a habit.

In true neuralgia, intracranial tumors, intracranial syphilis, and some cases of melancholia, morphia may be used if antipyrin fail. In such cases always give the morphine itself, and never let the patient know what you are giving.

Several cases of bromism have come under my observation, which were thought to be cases of intracranial disease. The off-hand advice, "Oh! take a little bromide," has done a world of harm. The bromides, in my opinion, are not hypnotics, for they do not produce an immediate effect. The so-called bromide sleep is really a stupor. There are but two diseases in which the use of bromides is justifiable, namely, epilepsy and sea-sickness.

PRIMARY CARCINOMA OF THE FUNDUS OF THE UTERUS.*

BY JAMES F. W. ROSS,

Lecturer in Gynæcology, Woman's Medical College, and Surgeon to the Woman's Hospital.

Miss E. P., æt. 60. Menses ceased for ten years. In July, 1880, she had a very severe sudden flooding, that left her in a weak condition. The anæmic condition continued in spite of treatment. She was sent to me by my friend Dr. William Oldright, in September, 1889. I dilated the cervix with graduated elastic pressure dilators, and, under chloroform, explored the uterine cavity with the finger. A nodule was felt in the neighborhood of the internal os on the posterior uterine wall, and a mass covered by mucous membrane, and without any evidence of excavation, was found projecting into the

*Reported to the Toronto Medical Society, March, 1890.

cavity of the fundus, with a general thickening and enlargement of the anterior and posterior walls of the fundus.

Vaginal and rectal examination showed the body of the uterus enlarged to about six or seven times what it should have been in an aged virgin, the enlargement feeling "doughy," affecting the left side more than the right. Parametrium apparently quite free. Ovaries normal, as far as could be made out. Complained of constipation, but no bladder symptoms. No vaginal discharge was present at this time, and no odor that would give rise to the belief that the tumor was malignant. From the rapid loss of flesh, the age, previous history of freedom from symptoms, sudden access of hemorrhage, and peculiar feeling of tumors, I felt safe in giving an opinion that the case was one of malignant disease,and not of multinodular fibroid growth. Whether carcinoma or sarcoma was immaterial. Having little faith in microscopical scrapings, as a means of differential diagnosis between these two forms of malignant tumors, and not wishing to produce irritation by scraping through the intact mucous membrane, I did not use the curette.

Tonics were given, and the patient was kept waiting until I deemed her strong enough to undergo the very serious operation of extirpation of the uterus through the abdomen. The operation per vaginam would have been extremely difficult, if not impossible, owing to the narrowness of the vagina, and the size of the uterus.

About the middle of October another severe hemorrhage occurred. She had been free of hemorrhage during the intervening period, but for about two weeks before the onset of the second hemorrhage, a very offensive watery discharge, of a brownish color, had been present. It had the characteristic odor of malignancy.

Although the patient was prepared for any risk, I felt it would be madness to operate, and refused to do so. The growth increased with great rapidity. She was unable to retain her urine, but did not suffer very great pain. The pain was paroxysmal. She gradually became weaker, and died without any special symptoms pointing to any organ outside of the pelvis. Some diarrhœa came on towards the end, and the urinary trouble continued. After death the pelvic organs were found bound down in a mass, so that at no spot could the finger enter the pelvic cavity. The cervix uteri infravaginally was unaffected, but just above the vaginal attachment a nodule, about the size of a small walnut, was found imbedded in the wall, with uterine tissue surrounding it on all sides. The fundus was represented by a thickened mass of necrotic tissue, with a large communication opening into the rectum. The rectum was otherwise unaffected, and its lumen was unobstructed. The bladder was intact, and the ureters undilated. The bladder wall was slightly thickened, and its mucous membrane, as well as that of the rectum, congested. Kidneys were quite normal. The cancerous growth had pushed the peritoneum before it, and the peritoneal cavity was therefore intact. No metastases. The microscope showed the growth to be carcinoma.

Primary carcinoma of the fundus uteri is a somewhat rare affection. Schroder estimated 28 cases out of 812 cases of carcinoma of the uterus, or about 3 per cent. They are so rare that every case should be published, and in such publication the following facts should be particularly stated :

1. Nulliparous or multiparous ; married or single.
2. Whether nodular or diffuse infiltrating variety.
3. Result of microscopical examination.
4. Duration of life, with or without operation.
5. Presence or absence of metastases.

The present case ran a more than usually rapid course, death occurring within 9 months after the first hemorrhage. Cachexia, contrary to what is usually found in such cases, developed very rapidly. Death in less than one year occurs in about 16 per cent. of cases. To my mind, the results of complete extirpation of the uterus through the abdominal wall have not been favorable enough to warrant operation, unless the patient is in middle age and fairly robust. I have seen death occur within twelve months after vaginal hysterectomy. In that case the growth was seen in its earliest stage, and one lip of the cervix was alone affected. But with all that, in looking over Professor Leopold's wonderful performance, as given in a paper in 1887, one must be fully convinced that

in all cases of carcinoma or sarcoma of the fundus, where practicable, vaginal hysterectomy should be performed, even though the patient may be thin and weak, and well advanced in years. Among his cases were women 60, 61, and 62 years of age. Two of them, aged 60 and 61 years, recovered from the operation. In carcinoma of the cervix, the matter may be different, that is, other methods may give as good results.

Selections.

THE SURGICAL TREATMENT OF TYPHLITIS.

In a paper on this subject by Mr. Lawson Tait (*Birm. Med. Rev.*) we find reports of 24 cases of typhlitis which he had treated. From them we select the following:

1. The first case, and the worst, was that of a young man, aged 19, who had gone through a relatively mild attack of the fever, and was practically convalescent and getting about. He was a collier, and, like all his class, especially in Yorkshire, fond of good feed. I had warned him against indiscretion, but a big joint of roast beef, Yorkshire pudding, and celery, were too much for him to resist. In two days he was in bed again with all the symptoms, as I thought, of a relapse. I found him in bed with his legs drawn up, intense abdominal pain, and a swelling over the cæcum which he could not bear to be touched. There was no diarrhœa, and the patient himself made rather light of his condition. On my third visit to him I found the cæcal swelling emphysematous, and next day, to my surprise, he died. I made a *post mortem* examination, and found the cæcum and some inches of the ileum and of the ascending colon completely gangrenous, and the abdominal walls over this mass infiltrated with putrid pus. I had mistaken an acute typhlitis for a relapse of typhoid; but the lesson was not thrown away; and the mistake was perhaps a pardonable one in a youth of two-and-twenty concerning a case where the complication followed so swiftly on the steps of the original disease. I argued with myself that I ought to have interfered with the knife; but I doubt if my interference would have been successful in a case so acute. But my argument was successful in the future, as the remaining seven cases will tell.

3. A girl, about 14 years of age had typhoid in September, 1867, and a well-marked attack of typhlitis beginning February 2nd, 1868. I opened the swelling on February 3rd, and found about a tablespoonful of pus just outside the peritoneum, so far as I could judge. The symptoms were immediately relieved, but the wound healed slowly and complete recovery did not take place for nearly seven weeks.

7. A mill hand (female), aged 19, was attended for a mild attack of typhoid about September, 1867. I was called to her in the Christmas of 1868, and found her with the characteristic cæcal swelling. I was told that it had been coming on steadily for nearly a fortnight, that she had been similarly attacked twice since the time I had attended her for the typhoid fever. In the first of the attacks the illness was so evanescent that no doctor was called in. In the second she was attended by Mr. Secker, and from him I subsequently obtained such information as to leave me without doubt that the disease was recurrent typhlitis. I immediately opened the swelling by a free incision, but nothing came out save a few teaspoonfuls of discoloured and very offensive fluid. This case was dressed with carbolic putty and tin foil. She was greatly relieved, and for a few days all went well. Then she got into the typhoid state, and large sloughs began to come away. At one of my visits I was horrified to see the vermiform appendix lying bare in the wound, and I thought death was inevitable. Unfortunately for me I told her people so, and I was therefore summarily dismissed; and I had the dissatisfaction of learning afterwards that she made a complete recovery in other hands. My satisfaction now about the case is greater, and my knowledge of the way to deal with patients has correspondingly increased.

8 My next case was a boy, who was a surgical curiosity. At the age of 9 he had a leg amputated on account of a lark with a reaping machine; at 10 I cut him for stone; four months after, he had typhoid fever; and before he was 11 he had typhlitis. He had complained of occasional pains over the cæcum all the time which had elapsed since the typhoid, and he had occasional outbursts of severe diarrhœa. The poor child

had no mother, and he was allowed pretty well to grow up as he liked by his father, who was a collier. Serious notice was not taken of his complaint till it was found that he had a large swelling in the groin, and for that he was brought to the Dispensary. I thought the swelling was a glandular abscess, and I opened it then and there. He was brought back in a week with a fæcal fistula. I put him under chloroform, enlarged the opening, and found, after a little search, that the fæces were coming from an aperture just at the insertion of the appendix into the cæcum. The cæcum was large and hard, and gave me the impression there was something in it. I laid it open, and removed a hard concretion like an almond. I dressed the wound with carbolic putty and sent him home. No persuasion could keep him in bed (I remember that the day after I cut him for stone I found him out in the cottage back yard—"Fair down stawed o' liggin i' bed," as he said), and the wound had to take its own course. Yet in less than a fortnight he was perfectly well and the wound healed. The concretion was simply hardened fæces. I often wonder how this boy has grown up, and how many other surgical calamities have fallen to his lot. I have tried to trace him, but have failed.

10. The next experience that I had in typhlitis was shortly after I settled in Birmingham. I was called to a young lad, who was the son of a market gardener, and was engaged in his father's business. He was about 19 years of age and very strongly made. He had complained of uneasiness for a day or two in the region of the cæcum, and the morning I saw him had been wakened early by violent pain completely localised over the cæcum. I could detect vaguely a sense of fulness, but nothing very definite presented itself. Two days after the tumour was most marked, and the characteristic constipation had resisted every reasonable effort that I had made to overcome it. At the request of the parents, the late Dr. Russell was called into consultation, and he agreed with me that it was a case of typhlitis, but, much to my regret, did not agree with me as to the advisability of and necessity for immediate operation. We met in consultation for several days, and at each meeting I urged my views upon my colleague, but without success, till one morning there was a condition of collapse, and it became evident that it was too late to do anything, and the patient succumbed without any operative interference being undertaken. I made a *post mortem* examination, and found a very characteristic post-cæcal abscess.

12. E. S., aged 40, came under my care on June 13, 1879, with a large œdematous swelling over the cæcum and complete œdema of the right leg and thigh. An incision was made over the mass and three or four ounces of fœtid pus removed. The patient made a tedious convalescence, but by the end of August was getting about. I have seen her repeatedly since, and she remains well.

21. E. T., admitted to hospital on March 4, 1886, with well marked acute typhlitis. I made an incision about four inches long over the tumour, and then dissecting carefully downwards for another two in hes I opened the abdomen, at the bottom of which I found the cæcum and appendix laid bare. The appendix seemed to me to be the source of the trouble, it was so very much swollen, so I removed it, and tucked in the stump, as in the previous case of the same kind. I stitched the inverted surfaces of the peritoneum carefully together. The patient made a very easy recovery, and went home on 5th April perfectly well, and I have seen her since. She has regained her health, and was very well the last time I saw her.

24. Early in August of this year I was asked by Dr. Leslie Phillips to see with him in consultation a patient of his, aged 27, who had suffered from recurrent attacks of typhlitis since last Christmas. They were of more or less severity and duration, and occurred on the follwing dates in this same year:—From February 1st till April 4th, from May 8th till about the 12th, July 11 till August 16th, the last attack being the most severe. In each case the characteristic egg-shaped tumour was present, and increased during the acute stage of the attack, and diminished during the quiescent period. When I saw him it was in its quiescent condition, but distinctly marked. I entirely agreed with Dr. Phillips' diagnosis of typhlitic suppuration, and concurred with his recommendation that it should be dealt with by operative interference. On August 20th the patient was

put under an anæsthetic by Dr. Leslie Phillips, and, assisted by Drs. Arthur Johnstone and Robert O'Callaghan, I made an incision over the cæcum, about three inches long and about an inch from the anterior superior spine of the ileum, dissecting carefully down till I opened a suppurating cavity on the outside of the cæcum. This I thoroughly washed out with plain water, and then, in tracing the indurated mass into its elements, I discovered the vermiform appendix swollen to about three times its normal size and very hard. Dissecting the adherent tissue from its base, I became impressed with the belief that it contained a foreign body close to the opening into the cæcum. I slit open the vermiform appendix about half an inch from its free end, and gave exit to small quantity of purulent fluid. I then passed a celluloid catheter, about No. 6 size, through the opening in the appendix as far as it would go. I found it was arrested just at the point where it seemed to me the canal was occupied by a foreign body. Gentle manipulation, with a little presssure, forced this foreign body into the cæcum. I left the catheter in the canal of the appendix. During the dissection the peritoneal cavity had been opened, and the next thing was to close this by stitching the free margin of the cæcum to the edge of the peritoneum at the rent. I then placed a piece of drainage tube in the deepest loculus of the abscess, and closed the wound round the drainage tube and the catheter. The catheter was removed by Dr. Phillips on the 23rd of August, and the drainage tube on the 26th. The wound healed rapidly, and the patient made an admirable and uninterrupted recovery. I have twice in cases similar removed the vermiform appendix, finding it thickened, swollen, and suppurating; but, though both my cases recovered, I am disposed to think that the risk of the operation is somewhat increased by this detail, and the satisfactory result in the present instance leads me to believe that it may be altogether unnecessary. Certainly I shall continue to follow the new plan of opening the appendix and draining it independently until I find some reason to revert to my former practice of removing it. I may say that the foreign body, which I believed had been contained in the vermiform appendix, was never found, although carefully looked for.

CONCLUDING REMARKS.

I have now placed on record the total of my experience in the surgical treatment of typhlitis, numbering 24 cases, the largest which I think has yet been accomplished at the hands of one surgeon. I think from it the conclusion is inevitable, that the earlier the operative interference is employed, the better for the patient. Even the cases where resolution is likely or possible, such an incision as is made can do no harm, or the likelihood of its doing harm is extremely small, and the likelihood of the disease permanently ending in resolution is extremely small. The general impression amongst practitioners is that more than half of these cases end by resolution, but this is probably only true of the individual attack which they have under observation, whereas the risk of delay of surgical interference is enormous, seeing the extreme difficulty there is for purulent formation to reach the surface by any process without involving wholesale destruction of important organs. As I have already said, the diagnosis of the three varieties in the inception is impossible—a differential diagnosis in fact is impossible—till such mischief in the graver cases resulted as to be practically irremediable. The risk, therefore, of an incision, which might have been unnecessary, is so slight, and the risk of a delayed incision, which was necessary, so enormous, that I am disposed to lay down an imperative rule that, as soon as diagnosis of typhlitis is established, no attempt should be made by delay to ascertain which variety it belongs to, but that a surgical operation in search of pus should at once be made It will be seen in several of my cases where no pus was found, the relief of tension alone was sufficient to benefit the patient enormously; and in not one of the cases, so far as I have been able to ascertain, has any harm arisen from the healed incision.

THE TREATMENT OF TUBERCULOUS DISEASES OF BONES AND JOINTS BY MEANS OF PARENCHYMATOUS INJECTIONS OF IODOFORM OIL.—By Dr. Wendelstadt (Bonn). At the suggestion of Dr. Heusner, in Barmen, who for the past four years has successfully treated a number of tuberculous joints with injections of iodoform oil, Professor Trendelenburg has employed this

method in a number of cases in his clinic, and had very gratifying results.

Injections of iodoform in ether, glycerine, or olive oil, have long been practised by Mikulicz, Billroth, Verneuil, and Burns, in cases of tuberculous abscesses, and in view of the clinical results obtained by them and many other surgeons, iodoform must be regarded as a prominent factor against the tubercle bacilli. That the presence of iodoform prevents the growth of giant cells in granulations has been proven by Marchand, and the fact that the abscess membrane of tubercular cavities injected with iodoform contains no bacilli has been demonstrated by Bruns and Nauwerk.

In the clinic at Bonn injections of iodoform ether 5% were at first employed, but although no toxic effects were produced on account of the small quantity of the drug used, severe pain was caused, and in three cases sloughing of the skin resulted. The ether was then replaced by olive oil, the proportions being 5:25, this latter was found to be free from disagreeable effects.

It is to be remarked, that the iodoform is to be mixed with the oil shortly before use, as otherwise iodine is rapidly developed, which may be recognized by the brownish-red color of the mixture.

After thorough disinfection of the skin in the neighborhood of the diseased part, 2 to 3 cm. of the mixture are injected into the tissues by means of a Pravaz syringe, having a fairly wide and sharp needle. The injections are to be repeated every eight days. If abscesses are present their contents are to be drawn off and the iodoform oil injected. If fistulæ have formed, it will be found more advantageous to inject into the surrounding tissues, rather than in the fistulous tracts.

After the injections have been made, a dressing of sublimate gauze is applied. In injecting fungoid masses, or the tissues in the proximity of fistulæ, considerable force must be used to empty the syringe. The number of injections required until improvement is obtained varies considerably; in some cases signs of improvement are visible after 3 or 4 injections, in others many more are required. The pains usually become less severe after the first injections, and the swelling gradually subsides, becoming harder and firmer. Fistulæ are very obstinate, the secretion gradually diminishes, but complete closure only takes place after protracted treatment. The movements of the diseased limb are restored to a certain extent, especially if cautious passive movements have been practised. Complete fixation of the joint is only necessary if the pain is very severe.

The above described favorable results are only observed in certain cases; many patients are much improved, but not cured, and resort must be had to the knife. In general, the injections have a very favorable effect.

The best and most rapid results from injections of iodoform oil are obtained in cases of recent development; especially when the disease began acutely. In a large number of cases the injections were preceded by opening of abscesses, or the curetting of the diseased parts, and recovery in these cases was more rapid than in those in which no injections were made. In several instances elevations of temperature were observed in the evening, or on the day following the injections, and was probably due to the fact that the oil was not perfectly sterile. It is, therefore, advisable to sterilize the oil before use.

The danger of iodoform poisoning is not to be apprehended because the quantity of the drug injected is small, and because little absorption takes place in the diseased parts. In one case a considerable quantity of unchanged iodoform was discharged from an abscess three weeks after injection.

Patients not too severely diseased are treated in the out-door service, the injection being repeated every eight days.

Thus far Trendelenburg has treated 109 cases by this method, of which 28 were operated on in addition, 36 were cured, 38 were discharged improved, and 12 were unimproved. Of 24 patients still under treatment, 14 show considerable improvement, and in the others the injections have not been used long enough to permit any judgment to be passed.—*Centralblatt f. Chirurgie.—Annals of Surgery.*

DANGER OF FLUSHING THE PERITONEUM WITH SUBLIMATE.—Of all recent innovations in abdominal surgery, flushing or irrigation of the peritoneum is undoubtedly the most popular in the best sense of the word. Operations for

the removal of diseased uterine appendages, electrolysis for fibroids, and complicated manœuvres in the region of the gall bladder, duodenum, stomach, or kidney, are seldom taken in hand except by experts. Every surgeon, however, may be called upon to open the peritoneal cavity, and one of the best safeguards against the dangers of intraperitoneal operations is flushing of the peritoneum, judiciously performed. The success of this practice has urged many surgeons to seek yet higher success by various modifications.

Mr. Lawson Tait uses fresh water, and others can claim high success, where the peritoneum is flushed, by the same unsophisticated fluid. But the antiseptic school of operators have largely adopted this practice. Of necessity, they had to take a great physiological problem in consideration: How much of the antiseptic must be mixed with the water poured into the peritoneum so as to ensure asepsis without poisoning the patient?

The merits of the antiseptic and the opposite school are not to the purpose in the present argument. Surgeons of the former school believe that an antiseptic agent should be mixed with the water, so they are right to estimate the virtues and dangers of that agent. Dr Gellé has shown that sublimate is a perilous compound for flushing. He describes three cases of ovariotomy where a 1 in 10,000 solution of perchloride of mercury was employed. In the first case, violent abdominal pain and vomiting took place during the night after operation. On the next morning a scarlatiniform rash appeared on the face, trunk, and arms. No rise of temperature or salivation occurred. By the third day all bad symptoms disappeared. The second patient died from exhaustion through diarrhœa, fifty-two hours after the operation, where the walls of a dermoid cyst were sewn to the edges of the abdominal wound. Interstitial nephritis was discovered. In the third case, parovarian cysts were removed. Obstinate vomiting lasted for two days. How far the sublimate was to blame, especially in the second case, which was incomplete, it would be hard to determine. Dr. Delbet's important researches must not be overlooked. He has shown that a large amount of the water first poured into the peritoneum is actually absorbed, especially if it contain a little table-salt. In fact, the process is a true transfusion, more likely to act as such on the circulation than Dr. Münchmeyer's practice of injecting water into the subcutaneous cellular tissue, as a substitute for transfusion of blood in hæmorrhage after labour. Transfusion, however, is not what is wanted in flushing the peritoneum. What is especially to the point is another fact discussed by Delbet. After a certain amount of water has been poured into the peritoneum, no more can be absorbed; then strong antiseptic solutions can be added without fear of absorption, provided that they be displaced by a final injection of pure water. This process might have prevented the serious results in Gellé's cases. Unfortunately, though a very pretty physiological experiment, Dr. Delbet's method is complicated. The second flushing with an antiseptic solution, followed by a third with pure water, is hardly in accord with the principles of the strict antiseptic school, for, according to them, the third would undo all the good done by the second. Carbolic acid is almost as likely to irritate as sublimate, if injected in a sufficient amount to counteract sepsis. No wonder, therefore, that the majority of antiseptic surgeons prefer, we believe, sterilisation of the water by prolonged boiling.

Flushing of the peritoneum has, in short, been widely adopted in abdominal surgery, with excellent results. Like all other surgical proceedings, it requires to be done carefully. It certainly displaces clots and noxious solid or fluid materials. It also checks, if it does not actually stop, hæmorrhage. It counteracts shock due to chilling of the viscera, whatever M. Pollailon's experience may show to the contrary. Lastly, the transfusion of water into the blood, though not aimed at by the surgeon, is no doubt beneficial. Judging from the experience of "non-antiseptic" surgeons, pure water answers all purposes with safety. The question was the subject of instructive correspondence in the *Journal* last autumn. If, however, it should some day be shown that some antiseptic should be added, that agent will not be sublimate.—*Brit. Med. Jour.*

A very old pharmacy is the Apotheke "Zum Mohren," in the city of Nuremberg, Germany, which in 1889 celebrated the 400th anniversary of its establishment.

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, APRIL 1, 1890.

REGISTRAR-GENERAL'S REPORT FOR 1888.

From this interesting blue-book we learn that August and March are the two months in which the most deaths, November the fewest, take place. More men die in March than in any other month; more women in August. During the year, some twenty-one centenarians died, the oldest, a blacksmith, being 110. Of these, ten were of Irish, two of Canadian birth; six were farmers, and three farmers' wives. Of those who died between the ages of 60 and 100, Ireland again claims far more than her share.

During the year, twenty-seven physicians died, of whom twenty-two were under fifty-five, and but three over eighty. The average age at death of professional men was 50.8 years; of doctors, 47.

The mortality among children from diphtheria is most appalling. Counting as diphtheria the deaths ascribed to croup, we have over 37 per cent. due to this cause. Nevertheless, during the past four years the total number of deaths due to this cause has been steadily decreasing. The counties of Carleton, Dufferin, Prescott and Russell, returned the highest death rate from diphtheria. Prescott and Russell had the high death rate from diphtheria of 1.2 per 1,000 living, yet in the previous year it was 2.1 per 1,000.

Typhoid is still the most fatal of the fevers, although there is a slight decrease in the number who died from it. More deaths are reported from fevers at the ages between 20 and 30 than at any other period in life.

THE UNIVERSITY OF TORONTO.

The recent disaster to our provincial University has proved in many respects a veritable "blessing in disguise." It has evoked the kindest and warmest expressions of sympathy from all parts of the civilized world. It has stirred the generous instincts of the friends of higher education, at home and abroad. It has shown the proud position which the institution holds in the hearts and affections of Canadians, from ocean to ocean. It has exemplified the sturdy loyalty, devotion, and love, of her graduates for their *alma mater*. It has shown the wonderful vitality, energy, and capacity, of the Canadian people. It has demonstrated the eminent fitness of her authorities to rise equal to the occasion, and provide the remedy for one of the worst calamities that has befallen this country.

The University will be restored—more than restored—in a short time. While the building was still burning, the general plans for the restoration were completed. The work that was accomplished in a few days was simply marvellous. The Vice-Chancellor started from Ottawa while the fire was still raging. The Chancellor soon followed. Colonel Gzowski and the architect inspected the building, to ascertain the amount of damage, while stones, mortar, and cinders, were still falling. The Provincial Government, Board of Trustees, Senate, and various faculties, worked together with a will. Amidst that throng of noble workers one figure was ever conspicuous, showing the strength of a giant, and the wisdom of a Solon—Sir Daniel Wilson, the venerable and worthily beloved President of the University. He was here, there, and everywhere, working early and late, with ceaseless activity, ever displaying superior judgment, rare tact, marvellous energy, and wondrous powers of physical endurance, all of which excited the admiration, the respect, and the wonder of his co-workers.

Sir Daniel, while a professor, saw the grand structure, in its erection, grow from its firm foundations to its beautiful pinnacles. As a professor, and as President, the work of his life, the work he loved so well, the work which has borne rich fruit in the past, the work which will endure for generations to come, all lay within

its walls. Who can describe his feelings as he witnessed its speedy destruction by the relentless, devouring flames? Perhaps he himself could, with his wondrous command of the choicest of the Queen's English, but we doubt it. Who will attempt to describe the interest which he is likely to take in the restoration of the building, and the additions which are to be made? May his life be spared for many years to witness the completion of the work at present contemplated, and the increased success of the institution after such completion!

NURSES AND DOCTORS.

One of the most important products of modern medical teaching is the trained nurse. Florence Nightingale's noble work, in nursing the soldiers in the Crimean war, did not cease when the sick and wounded had recovered. The number of good women who show a disposition to follow her example is increasing from year to year. Training schools for this purpose have been established in connection with large hospitals in various parts of the world. The growth of such schools in efficiency, as well as in numbers, has been marvellous. Among the most successful of these is the training school connected with the Toronto General Hospital. The high standard attained by the pupils of this institution is well shown by the results of the examinations which they are compelled to undergo before receiving their diplomas. This satisfactory condition of things is largely due to the assiduity and ability of Miss Sniveley, who has charge of the school.

In an excellent article which recently appeared in the *New York Medical Journal*, a comparison is instituted between the trained nurse and the recent graduate in medicine, in which the latter is made to appear at a certain disadvantage. The following sentences are worth quoting in full: "Take a case of typhoid fever, for example. The young doctor has read more, he understands the pathology better, and very probably can repeat the list of complications (learned at a quiz-class) more glibly than the nurse can. But he has never watched a case from beginning to end, he has not had an opportunity himself of intimately observing all the ins and outs of the disease, the peculiarities of the patients, the frequency of the occurrence, and significance of complications. In short, he is worried and perplexed over his case and cannot help showing it, while the nurse is at her ease and feels at home in her work. This is soon perceived by the anxious friends, and dependence soon comes to be placed upon the words and opinions of the trained nurse, while the reputation of the doctor gradually wanes. The fact is, the educational system is at fault. The nurse spent all her pupilage in the wards, the doctor spent all his time in the lecture-room. He learned science, she learned art; and patients like and admire art, while they, at the time of their sickness at least, do not appreciate the beauties of science. Bed-side experience was not required of him as a student, but nothing else but bed-side experience is required of him as a practitioner. A dissecting-room and dead-house experience and training afford no comfort to a living patient."

The writer of this article is probably referring to the courses in some of the New York Medical Colleges. We in Ontario are in a much better position in this respect than the profession of the United States. Our council demands attendance on four full sessions of six months each, while many of the degree conferring bodies across the line require only two or three. As a consequence, our students have a bed side experience which is extremely serviceable. We have made great advances in our methods of teaching in recent years, and still there is not enough time spent in laboratory and hospital work. The greatest obstacle now is the excessive number of didactic lectures which is required by the council and most of the universities.

We must acknowledge that a large proportion of our students neglect the art of medicine and surgery, to a certain extent, while cultivating science. Under the old apprentice system, the students had certain advantages which should not be overlooked. Our teachers, as a rule, fully appreciate this fact, and are making vigorous efforts to give thorough bed-side courses to their pupils. The hospital authorities are pursuing a wise course in assisting the teachers by placing the best possible facilities at their disposal. If the student possesses less knowledge than the trained nurse in the proper manage-

ment of a case of typhoid fever or pneumonia, it is to a large extent due to his own carelessness or negligence The system of holding clinical examinations, which is now in vogue, is doing much to show mere book-worms the folly of paying attention to theory at the expense of practice. All honor to those who are working so faithfully in the work of educational reform. We believe that their efforts will soon be crowned with success, and that in the near future the medical students of this province will have an opportunity of receiving a combined scientific and practical training which will be admirable in all respects.

Meeting of Medical Societies.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated meeting, 4th March, 1890.

The President, Dr. J. W. Rosebrugh, in the chair.

Dr. A. E. Malloch:

PARTIAL EXCISION OF SUPERIOR MAXILLA FOR EPITHELIAL EPULIS.

Mrs. F., æt. 58; consulted on 20th Sept., '89, by Dr. Mullin's request, regarding a growth of the hard palate.

The mucous membrane over the greater portion of the hard palate of the right side, and over the central portion of the left side, is raised, forming a flattish tumor of some consistency with ill-defined borders, presenting about its middle a scar. With the exception of the central incisors and left molars, the alveolar processes were destitute of teeth.

The swelling was first noticed in July, '89, when it burst, giving exit to some stinking pus; two teeth were then removed. Subsequently, in August, all the teeth from the right side, with the exception noted above. Later on the swelling was lanced without getting matter; the wound bled very freely. No history of specific disease. The glands under the jaw are unaffected.

Dr. Mullin and I agreed that the disease was an epithelial epulis, and advised operation. On 25th September, after chloroform anæsthesia the tongue was controlled by a strong ligature, passed through it a little distance from its tip; the upper lip divided in the middle line up to, but not into the nostrils. The cheek and lips were freed from the bones, from the posterior extremity of the right alveolar ridge to the canine tooth on the left side, and the nostrils separated from the bones from within. A deep groove was made in the right maxilla parallel to the alveolar process on the right side, at a level slightly above the floor of the nasal fossæ; the bony nasal septum was then divided with bone forceps, and the left maxilla was sawn through from the left nasal fossa to the side of the canine tooth, and backwards and inwards through the hard palate. The soft palate was then separated from the hard by the knife, and the piece of bone severed by bone forceps, cutting in the groove first mentioned, and connecting its posterior extremity with the opening between the hard and soft palates. The bone was then depressed by bone forceps, and completely separated by cutting a few shreds of soft tissue.

Subsequent treatment.—Well douching the parts with warm water frequently. She was sitting up on the third day, when two of the stitches in the lip were removed and plaster strip substituted. The three other stitches were removed two days later. By the 20th October the mouth was solidly healed and has remained so ever since. Microscopic slides from the tumor showing epithelial nests were exhibited by Dr. Olmsted.

The patient was shown to the members of the society. There appeared little or no disfigurement, and everything nicely healed as above described.

Dr. Algernon Woolverton:

LEAD POISONING.

J. S., æt. 26, of strong and muscular development, with good family and personal history, was first seen by me on the evening of the 20th December last. He was moaning and tossing himself about, and complained in distressing tones of an agonizing pain, chiefly referred to the upper half of the abdomen. He said the pain was continuous, but had frequent exacerbations, when it was almost unendurable. His face had a drawn anxious expression; the skin was cool; respiration thoracic, and a little increased in frequency; the pulse quite slow and soft, about forty-six per minute. On inquiry, I learned that he worked in a factory where lead was manufactured from the refuse material derived from the

distillation of coal oil. He had been working but a few days prior to the attack, the furnace having been shut down on account of a fire having taken place in the factory. Prior to the fire he had been working at the business for some months, and had never felt any ill effects from the work. Preceding the attack he seemed as well as usual, and showed none of the symptoms of lead poisoning. He worked during the whole night, but had to give up in the morning on account of severe pain. It is somewhat peculiar that the symptoms usually preceding lead poisoning were not present in his case. There was no constipation, loss of appetite, colicky pains, or emaciation; but the attack seems to have developed almost suddenly. Upon examining the mouth, the characteristic blue trail was pencilled along the gums. I found the bowels had not been opened that day. Upon inspecting the abdomen, there was no retraction of the walls, which is said to be characteristic of lead poisoning, but rather a slight distension accompanied with very marked rigidity of the abdominal muscles, which continued most persistently until after all the other symptoms had abated. This symptom I think worthy of your particular attention, for it impressed me more forcibly than all others, on account of its persisting and unyielding rigidity. It was as tense as that characteristic of peritonitis, but was not accompanied with pain and tenderness on pressure. Relief of the pain demanded first consideration. I injected one-half grain of morphia hypodermically, and left several half grain powders to be given at intervals of two hours if the pain persisted. I also ordered two ounces of castor-oil to be given at once, to be followed by two ounces of mag. sulph. if the bowels should not act. I also directed hot fomentations to be applied and to be frequently changed. On visiting the patient next morning I expected that there would have been some abatement of the pain, but found that such was not the case, nor had the bowels been opened. He had taken two and a-half grains of morphia during the night. I then directed that injections of hot-water and soap suds should be given and that the morphia be continued. Two or three of these injections were never returned per anum, having become absorbed, being retained on account of spasm of the sphincter.

The temperature still remained normal and the pulse slow, until the evening of the third day, when the pulse rose to 110°, and the temperature to 100-½° F. There was also at this time some vomiting, the bowels remained obstinately constipated despite frequent doses of mag. sulph. and copious injections thrown up through a long tube. The pain still persisted, although the pupils were contracted to pins' points, showing the patient was thoroughly narcotised. He was in a stupid, dazed state, but would answer on being questioned. When the temperature and pulse began to rise, I became anxious as to the result and requested a consultation. Dr. Miller being called in, we decided to give chloroform to relieve the intense sufferings, and to, if possible, overcome the great rigidity of the abdominal walls. We also passed a long tube along the rectum, and injected as much water as we could, but nothing came away with the injection. Chloroform was given until the conjunctivæ were insensible to the touch and the muscles of the extremities became flaccid and unresisting, and yet the abdominal muscular spasm did not yield; chloroform narcosis being kept up until a two-ounce vial was exhausted. When the effects of the chloroform wore off, the pain was as bad as ever. The prognosis at this time began to look unfavorable. We decided to substitute hydrate of chloral for the morphia, and obtained much better results. I do not think it would have been possible to have relieved the pain with morphia unless you had killed the patient; it almost seemed to aggravate the pain, and caused a feeling of great oppression in the head. Thirty grain doses of chloral, repeated every two hours, gave some relief and some sleep, and that drug was continued more or less frequently as long as the pain persisted. The next day, after the substitution of the chloral, the pulse again became slow and the temperature normal, but the bowels still refused to act, though no purgatives were given at this time on account of the vomiting, for I considered them useless, if not injurious, as long as the great rigidity and spasm of the bowels continued. It was not until the sixth day that the spasm of the bowels was overcome to such an extent that a passage from them was secured, from which time improvement set in. On the tenth day he was able to be up and about, considerably re-

duced in flesh, but otherwise not much the worse for the attack. At no time was there albumen in the urine. This is the severest case of lead colic that has ever come under my notice, and was especially interesting to me on account of the persistency of the spasm. Although the mortality is stated to be only from two to three per cent., I at one time feared a fatal termination to this case. The conditions for lead poisoning must have been very favorable in the factory, as all the employees, four or five in number, were attacked with more or less severity at the same time. One man had been employed at the business for twenty years, and had heretofore had no trouble from the lead. The method of procuring the lead is, briefly, as follows :

In distilling coal oil, three pounds of litharge (oxide of lead) is used for each barrel of oil. This is deposited in the black tar-like refuse which is collected after the distillation of the oil. This refuse is burnt in some open place, a brown, flakey, dry substance remains. This residue is put in a crucible furnace and a very strong heat applied, which causes a large portion of the lead to flow in a molten state from the furnace. while a considerable part is also driven off in a state of fumes, carried into pipes under ground, where the lead is deposited as a white oxide. The workmen are constantly inhaling these fumes, and as no great precautions are taken to prevent lead absorption, it is surprising that poisoning does not take place more frequently. The amount of lead taken in these cases must have been excessive, but harmful results are not always proportionate to the quantity of lead taken in. Small amounts, even 0.0015 per cent., if long continued, have been known to cause lead poisoning, and, on the other hand, large doses have been given for weeks with seeming impunity. Lead may be introduced into the system in a variety of ways, and it is often a difficult matter to discover the *fons et origo* of the poison. Sometimes it is due to the water in lead pipes or cisterns, especially when the water is soft; sometimes from drinking cider and beer and soda-water kept in lead utensils ; also from eating fruit kept in badly glazed vessels, and sometimes from canned fruit, the acid of the fruit acting upon the solder. It is well known that various trades and occupations are favorable to lead poisoning, such as plumbers, potters, type-workers, enamellers, painters. The colica pictonum must not be confounded, as is often the case, with the colica pictorum (the colic of painters). The former is a name given to a form of colic common among the people of Poitou, which is probably due to impure wine. Lead poisoning was known to the Greeks and the Arabians, who recognized the arthralgia and paralysis which sometimes follow this disease. In modern times Tauguerel des Plauche's (1830) work remains an authority upon this subject. It would seem that lead poisoning was more common sixty years ago than at present, as no less than 1,217 cases came under Tauguerel's observation. In every one of these cases colic was present—arthralgia in 755 cases, paralysis in 107, encephalopathy in 72, 17 of these latter cases were fatal. One attack predisposes to another, and many occur years after the first attack. Tauguerel relates the case of one painter who, for nine consecutive years, had attacks of lead-colic and other symptoms of lead poisoning, although he had ceased to follow his trade. Cats, dogs and horses have been known to have symptoms of lead poisoning, produced experimentally and from living in lead-infected atmosphere, or from drinking lead-contaminated water. Horses working in lead factories have had tracheotomy performed on account of paralysis of the larynx. Tauguerel was the first to point out that the blue line seen along the edge of the gums was due to a deposit of sulphide of lead in the substance of the gums, the decomposition of food affording a supply of sulphuretted hydrogen, which combined with the lead and caused the dark discoloration which extends in some cases to the whole mucous membrane of the mouth. The three most common sequelæ of lead poisoning are the arthralgia, paralysis, and encephalopathia. The last is the severest form of lead poisoning, and is found only among workers in lead. It may come suddenly with violent headache, and sometimes with amaurosis or severe convulsive attacks. Post-mortem appearances in these cases only give negative results. Lead paralysis may occur as early as the third day after exposure, or not till after years have elapsed. It affects chiefly the upper extremities and the extensor muscles, especially the extensor communis, then the triceps, and then the deltoid. This is in singular

contrast to the arthralgia, which chiefly affects the lower extremities and the flexor muscles. The paralysis may be confined to a single muscle, as the extensor of a finger, or involve the whole limb, or by gradual extension even the whole body. Sensibility is not usually affected, though there may be some circumscribed areas of anæsthesia. But the most characteristic changes take place in the nutrition of the paralyzed muscles. In a few weeks the muscles become very much wasted and atrophied, in marked contrast to the surrounding muscles, which retain their normal development. The prognosis is, as a rule, proportionate to the extent of the paralysis and of the atrophy. Post-mortem examinations show but few pathological changes, except in the affected muscles and peripheral nerves, and negative results in the central nervous system, thus rendering it very difficult to afford a satisfactory explanation of the various symptoms of the disease. Different investigators have described different pathological changes in the cord and medulla and brain, which is presumptive evidence that no definite pathological lesion has yet been discovered which may be stated to be characteristic of the disease. It was at one time thought that the lead acted upon the muscular fibres, especially the unstriped variety, but Heubel shows that this is not the case. He states that lead exists in the blood and all the organs in chemical combination with albumen. He says that lead cannot be detected by chemical tests prior to the destruction of the organic substances containing it. The amount of lead found in the system is comparatively small, not amounting in the average to .02 per cent., too small a quantity, one would think, to produce such grave results, and it probably can only be accounted for in some such manner as chronic alcoholic poisoning, that the circulation of a foreign poisonous material in the blood causes an abnormal nutrition of the whole system, but why it should cause colic (which is supposed to be a neurosis of the intestinal plexus) in one case, arthralgia in another, and encephalopathy in another, is not yet understood. I will not dwell upon the general treatment of this disease, for I believe time is the chief element in it, but the general indications are the relief of the pain and the overcoming of the obstinate constipation, and my experience points to chloral as being the drug best adapted to accomplish this purpose.

INGERSOLL OLMSTED,
Secretary.

Pathology.

BACILLUS TUBERCULOSIS *V.* GASTRIC JUICE.

Zagari (as reported in the *Centralblatt für Bakt. und Parasit.*) has recently performed a number of experiments for the purpose of determining the action of gastric juice upon the bacillus of tuberculosis. After feeding dogs with excrementitious matter from tuberculous patients, and also with the organs of those dead of tuberculosis—both being proven to contain bacilli in abundance—he found that so far from suffering damage from their unwholesome diet, some of the animals even became fat upon it. The excrement of the dogs on examination proved to contain bacilli in perhaps greater numbers than that fed to them. Inoculations with these sufficed to infect guinea pigs with tuberculosis, showing that the bacilli had well resisted the action of the gastric and intestinal fluids. This is the more noteworthy, since the acidity of the gastric juice of the dog is high.

Zagari also submitted tubercle bacilli to the action of gastric juice outside the animal organism, with the following results:—

After 3-4 hours exposure at 38° the bacilli still possessed their full virulence.

After 18-24 hours, their virulence was completely lost.

After 6-8 hours exposure, their virulence was somewhat diminished, the disease following inoculation of guinea pigs very slowly.

After 7-9 hours a *local* tuberculosis alone could be established.

Acidity of gastric juice of dog=0.159%; of consumptives whose excrement was used=0.0675%; of juice used in subsequent experiments=0.1652.

These results of Zagari agree very well with those obtained by Straus and Wurtz, who exposed various pathogenic organisms, amongst others, that of tuberculosis, to the action of gastric juice, having the same object in view as Zagari. The experiments were all made outside

the animal organism. Gastric juice was taken from dogs, men, and sheep, and the bacilli were exposed to it at a temperature of 38°C.

After 6 hours exposure, they found the bacilli to be still active, producing both local and general tuberculosis in rabbits and guinea pigs inoculated.

After 8-12 hours, an abscess was produced at the site of inoculation, and that healed rapidly without general infection.

After 18-36 hours, the bacilli had completely lost their virulence.

Judging from these results, we must come to the conclusion that so long as the gastric juice retains a sufficient degree of acidity, tuberculosis of the alimentary canal will be unlikely to occur. The practical application is not far to seek. We must, by some means, keep the gastric juice of tuberculous patients in its normal condition as regards acidity, or even increase it, so far as compatible with good digestion.

Clinical Notes.

A CASE OF INTESTINAL OBSTRUCTION.

BY ANTHONY OCHS, M.B., HESPELER.

I was called to see Mr. M., æt. 55 years, about 2 a.m., suffering from severe abdominal pain, which was paroxysmal. There was no tympanites or special pain on pressure. A hypodermic eased this pain and put him to sleep. Next day he was about, but began to feel very sick, and towards evening vomiting set in, at intervals at first of 5 hours, later of only 1½ to 2 hours. There was also a slight return of the pain. Mild purgatives were administered in tablets of aloin, bellad., and strych.; but without any result.

The following day, a copious enæma brought away a lot of hard masses, but without alleviating the nausea. In fact the vomiting became worse, and in the course of the next 24 hours, 12 large round worms were vomited; sometimes two at a time. The vomited matter became more and more offensive, until it was altogether fæcal. On the following morning another enæma was used, but only brought with it a small amount of slimy matter tinged with blood. Another enæma was again used, and in connection with friction over the seat of ileo-cæcal valve, succeeded in bringing away, as a first result, the 13th worm, with immediate relief.

There is no doubt that the obstruction was at the valve, and was caused wholly by the worms. It is worthy to remark here, that the patient had previously suffered (years before) from an obstruction, which was pronounced inflammatory, and it is probable there was some thickening or narrowing in its calibre.

EPILEPTIFORM CONVULSION PRODUCED BY EXALGINE.

BY GEO. ACHESON, M.A., M.B., TORONTO.

Believing I have had, to say the least, an uncommon experience with exalgine, I am tempted to relate the case, in the hope of eliciting further information in regard to the possible untoward effects of this drug from those who have used it more extensively, and to draw attention to the dangers of the indiscriminate use of the newer analgesics.

L. T., a young lady, aged 18, consulted me on the 25th of January last, during the prevalance of the influenza epidemic, suffering from the initial symptoms of a severe "cold," the most pronounced of which were pains in the head, back and limbs, feverishness, and sense of oppression in the chest. She was anxious to get immediate relief, and, having a solution of exalgine with me, I gave her at once a dose of somewhat less than 4 grains. About two minutes after she had taken it she complained that she felt "very funny," and she repeated this expression once or twice. Within five minutes she had a well-marked epileptiform convulsion lasting about two minutes, during which the tongue was bitten, and there was complete loss of consciousness. Consciousness gradually returned in about twenty minutes, with nausea and vomiting. On coming to herself she said the pains were all gone, and beyond a stupid feeling for some hours, no bad effects seemed to have followed the fit.

I have used exalgine as an analgesic in single 4-grain doses on several occasions, both before and since this case, and at no other time, has it produced any but the most satisfactory results.

The convulsion in this instance may perhaps be explained by the history of the patient. Her family history and her own temperament are highly neurotic ; and about puberty she suffered from hystero-epileptic attacks, though for the last three or four years there has been no evidence of such a condition. At the time the drug was administered she was in a state of over-wrought nervous excitement, and resistance was at a minimum. Further, the stomach was empty, and the drug in alcoholic solution was completely absorbed almost at once. The nerve centres, therefore, in a condition of unstable equilibrium, were overpowered and lost their balance.

I may add that the exalgine used was manufactured by Brigonnet & Naville, and was made up according to the following formula :

℞.—Exalgine, gr. xxxij
Tr. Aurantii recentis,
Syr. Aurantii aa. ℥i
M.

Dose—℥ij.

PERITYPHLITIC ABSCESS.

BY J. SPENCE, M.D.

Case 1. Thos. C., æt. 40, married. Street-car driver. Has a fine physique ; healthy, florid complexion, and six feet high ; 200 lbs. weight —is the very picture of health. Has been driving a street car this forenoon, 7th Sept., 1889. Has been home to dinner. On his way back to work, after eating a hearty meal, he does not feel well, and calls at my office to consult me. He complains of a slight pain in the right iliac region ; has felt some uneasiness here since last night, when he walked home from the Toronto Street Railway stables, a distance of about three miles. Temperature, normal ; pulse, full and regular, about 70; tongue, clean and moist. A tumor, about the size of a hen's egg, or a little larger, situated midway between the anterior superior spinous process of the ilium, and the linea alba on the right side, is discovered. The upper margin of swelling is on the same level as the crest of the ilium. It is hard, non-fluctuating, and immovable. He does not complain of much pain when it is handled. The bowels are regular ; once a day as usual. There is no distress in passing urine. Owing to the absence of the usual sequence and characteristic symptoms and signs of perityphlitic abscess, namely, pain, pyrexia, and swelling, etc., there is considerable difficulty in the way of a positive diagnosis. However, perityphlitic abscess is suspected as the most probable disease. Prescribed absolute rest in bed, and gave a grave prognosis if absolute rest were not secured and maintained. I also gave a dose or two of castor oil, to make sure that the bowels had really moved, and were not impacted with fæces.

Sep. 8th. I find, instead of going home to bed, my patient went down to report himself at the office. The pain had increased very much, and he had some difficulty in getting home, on account of its severity. His temperature now is 103°, pulse 85. His bowels have moved freely several times. He does not complain of much more pain than on the 7th, though the tumor has enlarged.

9th. No change in his condition worthy of note.

10th. At 6.30 a.m. I was called in a great hurry. Patient is suffering intensely ; pains extending all over the abdomen. There is great tenderness. Pulse rapid, feeble, and almost imperceptible. Profuse perspiration. Greatly distressed countenance. Temperature has fallen to a little above normal. Complains of pain in the bladder, extending into the testicle. Perforation, or rupture of abscess, is diagnosed. Morph. sulph. is given in sufficient doses to quiet the pain.

I ask for an immediate consultation, with a view to operating, or considering its advisability. Consultation takes place in the evening. Consultant is satisfied that the case is one of perityphlitic abscess. Does not think abscess has ruptured into the peritoneal cavity, though he thinks inflammation has extended over peritoneum. Is opposed to the operation in the meantime, believing in "the policy of delay and palliation," which is sound doctrine, according to some excellent authorities, *e.g.*, Sands, Pilcher, and others. — N. Y. Surgical Society, Dec. 6, 1886. *Annals of Surgery*, Dec., 1889.

11th. 7 a.m. Patient is vomiting terribly—has been since 4 a.m. Vomit is hot and acrid, excoriating his tongue and lips ; is dark and

grumous-looking; has a feculent odor. His distress is dreadful. He died at 4 p.m.

Drs. Hunter, McConnell, and myself, conducted the *post mortem*.

Autopsy.—On opening the abdominal cavity, a dark brown sanious, sero-purulent fluid gushes from the opening. The peritonitis has been diffuse, as the whole peritoneum is engorged. On reaching the right iliac region, a great quantity of yellow but offensive pus is found, between the coils of intestines, such as are not glued together with lymph, for in this region the intestines are for the most part bound together with lymph, and can hardly be separated. The abscess cavity comes in contact with the intestines but at one point, and that is the cæcal termination of the ileum. Here it is in close contact with the anterior wall of the intestine, its transverse diameter being about an inch and a half. The lymph, which surrounds the abscess cavity, extends to the cæcum on the right, but comes in contact with the bowels at no other po nt. The exudate has entirely surrounded the right ureter. The opening of the abscess into the peritoneal cavity is from its anterior wall, which is nowhere in contact with the anterior wall of the abdomen. No ulceration or gangrene of the mucous membrane of the vermiform appendix, cæcum, or ileum, is found on careful examination.

Remarks.—The pathology of this case is obscure. Yet the numerous and sudden stops of a street car, with their hand-breaks reaching to a level with the abdomen, supply the conditions of an exciting cause in any perityphlitic case in a Toronto street-car driver. But just why the peritoneal covering of the ileum should be selected as the point upon which or from which an abscess should develop, and not the vermiform appendix, which is considered by some, McBurney, and others, in their recent additions to the literature of this subject, and emphasized by L. S. Pilcher in his editorial on the same, as "the primary and essential condition of typhlitis, perityphlitis, or paratyphlitis," I cannot tell. Yet it is evident the vermiform appendix played no part in the pathology of this case.

Treatment.—I believe that Fitz's treatment, viz., an operation not later than the third day, would, very probably, have saved this patient's life. An immediate operation would have been better.

Case 2. John Mc., æt. 19, single; occupation, conductor on Toronto Street Railway.

History: Had crampy pains in the bowels, beginning on the 25th of Sept., 1889. Did not think them of sufficient importance to consult a physician for two or three days. Bowels were loose at first, afterwards constipated. Took "salts" repeatedly, but vomited everything. Consulted Dr. Ross, Sherbourne Street, on 28th. Says Dr. Ross "gave something to relieve the pain, and something to move the bowels." Bowels moved on the 28th; vomiting continued. Pain was very severe all over the abdomen. Was in a boarding-house, and wished to move to an uncle's on Stafford Street, in the west end of the city. Was allowed to move in the ambulance. As he was now too far away for Dr. Ross to give the attention required, the doctor advised the patient to secure the services of a neighboring physician. Dr. Ross diagnosed "acute peritonitis." Dr. Hunter first saw the patient on the 1st day of October—six days from the onset of the disease. I was called in consultation on the 2nd Oct., at 2 o'clock p.m. Found a patient with a pale, pinched, anxious, and distressed face. Hiccoughs were troublesome. Vomiting frequently. Bowels have not moved since the 28th, though he has been taking saturated sol. of salines, mag. sulph. and soda sulph. every 4 hours. Dr. Hunter says patient has been sinking fast since the 1st—even since he saw him in the morning. Complains of very great pain in right iliac region. We have no difficulty in mapping out a tumor, both by palpation and percussion. The upper margin of the tumor was more than an inch below an horizontal line meeting the anterior superior spines of the ilia. The maximum dulness was about two inches and a half internal to the anterior superior spine of the right ileum. Dr. Hunter and myself diagnosed a perityphlitic abscess. I introduced a hypodermic needle in supposed centre of tumor, but drew off no pus. Determined on operation; assisted by Drs. Hunter and Burt, I operated. Made an incision two inches and a half long, parallel to Poupart's ligament, over the point of maximum dulness; scratched a small opening into the peritoneal cavity, and introduced a finger carefully to feel for abscess. At once, without my being aware that the abscess was touched, the pus came welling out

of the abdominal incision. The abscess had burst within the peritoneal cavity, and the pus spread over the adjacent coils of intestines. The abscess cavity and appendix were examined; no perforation was found. We washed out the abdominal cavity, and abscess cavity, with hot carbolized water, in large quantities, till the water returned as clear as it was before entering the peritoneal cavity. Introduced a single drainage tube, and stitched up the wound.

9 p.m. Pulse, 140; temperature, 101°; resting fairly well.

Oct. 3rd 8.30 a.m. Temperature, 99°; pulse, 108-112 a minute. No hiccough or vomiting. Has passed flatus, and the bowels have felt like moving. Washed out the wound and tube with hot carbolized water, 1 in 40.

9.30 p.m. Bowels moved freely during the day. Pulse, 100; temperature, 99.5°; tongue moist; general appearance favorable.

4th. 8.30 a.m. Looks well; bowels moved four or five times in the night. Pulse, 92; temperature, 99.6°. Has been taking ice water and ice milk, also a saturated solution of salines. Temperature, 98.5°; pulse, 85 a minute. Feels hungry. From this date he progressed, without an unfavorable symptom, to complete recovery. He suffered severe tympanitic pains for about two weeks and a half. These were relieved by castor oil. No pus escaped from the abdominal cavity through the drainage tube.

Remarks.—1st. The prompt operation saved this patient's life, as the abscess would have ruptured within a very short time, or immediately, on any exertion.

2nd. Pus bursting within the abdominal cavity is not necessarily fatal, but our plain duty is to remove it as soon as possible, and make provision for the escape of any which may form afterwards. Treve's suggestion, "not to cut over the point of maximum dulness," could not have prevented the rupture of the abscess into the peritoneal cavity, because the abscess was not adherent to the anterior wall of the abdomen, and any effort to bring it forward to the abdominal incision would have ruptured it within the peritoneum.

Books and Pamphlets Received.

Tenth Annual Report of the State Board of Health of Illinois.

Atti della Società Toscana di Scienze Naturali residente in Pisa. Memorie, Vol. x.

Miscellaneous.

The following additions have been made to the Faculty of the New York Post-Graduate Medical School and Hospital: Charles B. Kelsey, M.D., Professor of Rectal Diseases. Charles H. Knight, M.D., Professor of Rhinology and Laryngology. Reynold W. Wilcox, M.D., Professor of Clinical Medicine. Dr. S. Lustgarten, formerly Privat Docent in Vienna University, Instructor in Syphilis and Dermatology.

Professor DaCosta, in treatment of *delirium tremens*, depends largely upon alimentation. Tincture of capsicum is of value not only as a stimulant, but increases the appetite. As to stopping the whisky, this should be done in all cases where possible, depending largely upon the amount of food taken by the patient. To give rest and sleep, ten grains each of chloral and potassium bromide, given every two hours (if indicated), is far preferable to opium for this purpose.

ONTARIO MEDICAL COUNCIL ELECTIONS.—The returns from recent elections show some changes in the *personnel* of the Council. Among the territorial representatives there will be at least two new men—Dr. A. Jukes Johnson, of Toronto, for Midland and York, in the place of Dr. Burns, and Dr. Rogers, of Ottawa, in the place of Dr. Cranston, of Arnprior. Dr. Russell, of Hamilton, the former member, was successful in his contest with Dr. Miller. There was an exciting contest in Malahide and Tecumseth between Dr. MacArthur, of London, the former member, and Dr. Sloan, of Blyth. Dr. MacArthur was declared elected, but we understand a protest will be entered, with a fair prospect of changing the result. In the collegiate representation Dr. Brettin will replace Dr. Buchan for Toronto University, and Dr. Thorburn will replace Dr. H. H. Wright for the Toronio School of Medicine. There will be two new homœopathic representatives in the place of Drs. Husband and Vernon, resigned—Drs. Luton, of St. Thomas, and Oliphant, of Toronto.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, THE J. E. BRYANT COMPANY (LIMITED), 58 BAY ST.

TORONTO, APRIL 16, 1890.

Original Communications.

TREATMENT OF HIP DISEASE.

BY B. E. M'KENZIE, B.A., M.D.,

Lecturer in Orthopædic Surgery, Woman's Medical College, and Consulting Orthopædic Surgeon to the Hospital for Sick Children, Toronto.

The importance of correct principles of treatment of this disease may be inferred from two sources: (1) its frequency; (2) the unsatisfactory results that come so often to our notice. Mr. Bryant thinks that 33 per cent. of the total number of joint diseases are cases of *morbus coxæ*. The Clinical Society of London, in 1881, reported 45 cases treated by excision, of which 35.5 per cent. died from causes connected with the disease, and 15.5 per cent. died from the results of operation: 260 cases with suppuration treated without excision, of which 30.4 per cent. died from causes connected with the disease; and 124 cases without suppuration treated without excision, of which 10.5 per cent. died. Of 954 general cases (medical and surgical) admitted to the Hospital for Sick Children, Toronto, 154, or more than 16 per cent. of all the cases, were hip disease.

This disease is pre-eminently one of childhood. Of 1344 cases collected by Dr. G. A. Wright, of the Manchester Royal Infirmary, more than 1,000, or 75 per cent. of the cases, were under fifteen years of age. Of 979 cases reported, 55 per cent. were under ten years of age.

Without entering into the question of pathology, or of diagnosis, it may be stated that the disease referred to in this paper is that which attacks one or both of the bones which enter into the formation of the joint, and tends to go on to its destruction.

ILLUSTRATIVE CASES PRESENTED.

Case 1. July 9th, 1889. W. S., male, æt. 4 years. First noticed lame in August, 1887. Was kept in bed for several months. First abscess formed in March, 1888. The child is pale, but appears fairly nourished. Cannot walk, but shuffles along the floor in a squatting position. Leg is flexed on the abdomen at an angle of 90°, and in marked adduction. The leg is kept in this position, the child not permitting motion of any kind at the joint. Joint tenderness was very great. There are several sinuses about the outer and anterior aspects of the thigh discharging pus, and there is a collection of pus not yet opened at the junction of the thigh with the perineum. Family history, negative; no history of injury.

July 20. A Thomas posterior hip splint applied, the leg being secured at an angle of 140° with the axis of the body. Ordered cod liver oil.

July 27. Splint readjusted and leg placed at an angle of 160°, without as much objection on the boy's part as was made to its first application. The boy creeps about on left knee, without hurting the diseased joint. Sleeps at night without waking and crying as formerly.

Oct. 14. Splint has been readjusted several times, and leg is now retained at an angle of about 175°. General condition of the child has much improved, and suppuration is less in amount.

The leg being rotated outward to an angle of about 60°, I made an addition to the stem of the splint, having a foot-piece attached, by which I was able to correct the rotation, and if necessary secure extension also.

Case 2. M. A., female, æt. 8 years; referred to me by Dr. Barton. Family and personal histories good. First noticed lame in March, 1888, and complained of pain in knee and extending up thigh. No pain in hip at that time. Had local applications to the knee. Was soon better; was active during the summer, and thought by her parents to be quite well. In October the symptoms which were manifested in March reappeared with greater severity. First seen by me Nov. 26th, 1888. She was then pale and poorly nourished, confined to bed, having much pain at outside of knee, much joint tenderness, great thickening of the bone about the great trochanter, flattening of the gluteal region, and lessening of the fold. Sleeps badly. Night startings severe. Passive motion at the joint limited. Angle of greatest flexion 90°, of greatest extension 180°. Slight shortening when measurement was made from the umbilicus. Left thigh one inch smaller than the right.

Dec. 5. American extension-splint applied. Apparent shortening* now is two inches.

Dec. 20. Splint has been worn in bed. Sleeps well, without jerking the limb. Appetite much improved. Takes a mixture of cod liver oil and iron.

April 11, 1889. Splint is worn with comfort. General condition of patient is much better; walks fairly well without crutch. Appetite good; sleeps well. Encouraged to go outdoors. Swelling about the joint increased, pus probably present. No shortening.

July 30. Walked one mile to my office today. General condition good. Large quantity of pus collected behind and below the great trochanter. Does not complain of tenderness Slight apparent lengthening. Walks well.

Nov. 26. General health good. Abscess opened spontaneously yesterday. Has lived outdoors much during the summer.

Feb. 10th, 1890. The family being very poor, but not consenting to allow the child to go into hospital, she has been kept in the house nearly all the time, not being supplied with clothing for going out. Walks about the house, but is pale. Has lost flesh, and suppuration is abundant. The splint (shown in fig. 4) is worn with comfort

Case 3. March 21st, 1889. W. D., male, æt. 13 years; referred by Dr. Dawson. History of

Fig 1

lameness extending back three or four years. Is pale and poorly nourished. Thigh flexed on body at an acute angle, and adducted about 30°. Large abscess below region of great trochanter, and an opening near crest of ilium discharging pus. Passive movement at the joint very slight. Had been treated in hospital for several months by extension with weight and pulley. The head and neck of the femur have entirely disappeared through long suppuration, and the shaft is drawn up, so that the left leg is three inches shorter than the right. (Fig 1.)

March 22nd. Under ether, assisted by Drs. Dawson and Harley Smith, the adductors were

By *apparent shortening* I express the condition shown when measurement is made from umbilicus to internal malleolus; by *real shortening* the condition found when measurement is made from the anterior superior spinous process

cut subcutaneously, so that adduction could be nearly corrected. Flexors were cut, so that the leg could be brought down to 150°. Fixation in this position was secured by plaster of Paris. Cod liver oil and iron prescribed.

April 12. General health much improved. Large amount of pus being discharged from the opening near the iliac crest, and from one where the flexors were cut. Long splint applied.

Sept. 9. Though he has broken his splint many times, and has been hard to control, yet improvement has been very satisfactory till lately. He engages in rough sports, and changes the splint without my knowledge. Splint is in bad condition to-day, there is movement at the junction of the stem and pelvic band. Has been walking without any elevation of the foot on the sound side. Adduction is much increased.

Fig 2.

Oct. 5th. Owing to my inability to govern the boy, I applied a Thomas' posterior splint to-day.

Nov. 3. Improvement has occurred since the Thomas' splint was applied.

Feb. 10, 1890. Improvement is very satisfactory. The leg is extended to about 170°. The boy has grown well; increased in flesh; sinuses have nearly closed, and there is no tenderness about the leg or hip joint. (Fig. 2.)

Case 4. June 1st, 1889. M. Y. (Fig. 3) (referred to me by Dr. A. H. Wright), female, 4 years. Lameness of an indefinite kind, first noticed seven weeks ago. Grandmother died of consumption. Is very pale, poorly nourished, has an anxious look, very poor appetite, lies in bed on the diseased side, with leg drawn up to a varying extent, although extension is applied by means of a pulley and weight of about two pounds. Complains of pain in the knee. Movements at the knee are found normal; no swelling. Muscular spasm very marked at the hip, and all movements at that joint much limited. No night startings. Slight atrophy of thigh muscles of the diseased limb.

June 11. Long extension splint applied to-day, and flexion to about 150° permitted. McGee's Emulsion of Cod Liver Oil, with ext. malt, ordered.

June 14. Splint worn with much comfort; readjusted to-day in line with axis of body. Sleeps better, appetite and spirits improved.

June 27. Last night abscess opened spontaneously, just below the middle of Poupart's ligament. For some time the leg has been held in abduction.

Aug. 20. General condition good. Sleeps and eats well; walks with great freedom. Pus is still discharging from the sinus. Leg can be moved through an arc of 45° without discomfort.

Fig 3

Jan. 31. The progress thus far has been most satisfactory, the utmost attention and care being given by the parents to all directions. The general health is good, patient has grown well, the leg is held in normal position, and free movement permitted through an angle of 90°.

Case 5. July 14th, 1889. J. K., 17 years. Family history good. About Christmas, 1886, had pain in sacro-iliac region. Had also pain in the side on deep breathing, and pain in the epigastric region. In May, 1887, a spinal brace was applied, which gave no effective support. Was able to go skating at Christmas, 1887, but after sitting for a short time, was unable to rise or to remove skates because of pain in region of hip. In January, 1888, a long hip-splint was attached to the spinal brace. Went to bed in March, 1888, and leg soon became flexed to a right angle with the body. Extension by weight was applied, and flexion corrected. In bed five months. Admitted to the General Hospital in September, 1888, and extension applied till

Christmas. An abscess, which formed on outer side of thigh, was aspirated, and subsequently an incision made about three inches below and about two inches anterior to the great trochanter. At home, while in bed, extension kept applied till May, 1889. From that time moved about on crutches. Is pale, but fairly well nourished. As he lies in bed, both legs are equally extended. Leg is swollen from foot to the gluteal region. Very great tenderness, especially about the great trochanter, and below Poupart's ligament. Will not permit anyone but his mother to help him. Cannot turn in the bed, rise from it, nor lie down again, without her assistance. Frequently necessary to apply the extension at night to quiet the jerking of the limb. Cannot endure it constantly Considerable discharge still from the opening on outside of thigh. No thorough examination made, because of the great suffering in handling the leg.

Fig 4

Aug. 6. Extension hip-splint applied.

Sept. 16. After a little discomfort the splint is being worn with great relief. Can rise from the bed or couch, unaided, and lie down again; walks without a crutch, sleeps well at night, suffers no pain, has fallen twice without injury.

Oct. 11. Experiences great comfort night and day in wearing the splint. Leg may now be handled freely. Movements at both hip and knee very limited. General health good. Lay in bed for a few days while splint was being repaired. During this time the extension by weight and pulley had to be several times employed, as the old jerking returned.

Feb. 1. Improvement in this case has been rapid and continuous. He goes about town, comes two miles to my office, and I have given consent for him to return to his business as book-keeper—still wearing the splint. (Fig. 4.)

Case 6. Dec. 14, 1889. H. B., a pale, strumous-looking boy of 12 years; referred by Dr. Carson. In August, 1887, there were evidences of hip disease, and the boy was kept in bed with a Liston splint. In a few weeks he seemed quite recovered, and remained apparently well for several months. Showed symptoms again in February, 1888, and was put to bed with extension by weight and pulley, and was kept there till August, 1889. At some time, during this period, an abscess opened at outer side of the thigh, but only a small quantity of pus was discharged. The leg is held flexed, at an angle of about 140°, and abducted about 30°. There is shortening to the extent of 2½ inches, and the left thigh is two inches smaller than the right. Fibrous anchylosis at the joint

Fig 5

seems so complete that no movement could be obtained.

Dec. 28. Thomas' hip-splint applied, and the deformity slightly corrected.

Jan. 16, 1890. General condition improved. Is taking cod liver oil. Splint readjusted, increasing the angle of extension about 15°, without discomfort Sleeps well; appetite good. Slight excoriation in gluteal region, under the splint.

Feb. 1. Splint is being worn with comfort; leg is extended to about 165°, and abduction is reduced to about 15°.

Case 7. B. F., 8 years, came under treatment Aug. 28th, 1888. (In Hospital for Ruptured and

Crippled, N.Y.) Family history, negative. Had some trouble in hip at 17 months. Was treated at Bellevue Hospital by a Taylor splint. Wore splint 3 years, after which for 3 years nothing was done. Is fairly well nourished. Deformity at left hip (Fig. 5.) Great trochanter ¾ inch above Nelaton's line. Leg flexed on thigh, and thigh on abdomen. Adduction about 20°. Adductors quite tense. Angle of greatest extension 135°. Angle of greatest flexion 100°. All movements limited. No grating felt in the joint. No joint tenderness. No peri-articular tenderness. Stands with marked lordosis, and some scoliosis to the right. Walks with marked hip

Fig 6

limp, heel being four inches from the ground. Deformity reduced by tenotomy and moderate extending force, and leg retained in position by plaster of Paris spica. Cod liver oil given.

Oct. 13. In excellent health. Hip splint applied. Caries of the spine found, and plaster of Paris jacket applied.

In a few months this patient was discharged, and continued as an out-patient.

Fig. 6 shows this patient to be wearing a plaster of Paris jacket for spinal caries. (This case is published by consent of Dr. Gibney.)

Hip disease, with few or any exceptions, being a chronic articular ostitis of tubercular origin, a point of first importance in treatment at all stages is to secure for the patient good food and good air. To these, no doubt, is attributable much of the improvement resulting so speedily in many cases removed from the houses of the poor to the hospital wards. In all forms of wasting disease more trust, to-day, is placed in the good effects of fresh air, sunlight, proper climatic influences, change, and good food—in a word, in hygienic management in its widest sense—than in any list of drugs. As an aid in supplying the needed nourishment, cod liver oil requires a first place. Fortunately, children take it more readily than adults, and generally become very fond of it in a short time. In cases where difficulty is found in inducing a child to take the pure cod liver oil, a beginning may be made with some of the emulsions, after using which for a length of time, the pure oil is often taken without difficulty. Iron makes a good second in importance.

In favor of securing rest for the diseased joint, there is a general consensus of opinion. Greatly varied are the means employed for its attainment. In Britain perhaps more than elsewhere, this indication has been thought of sufficient importance to justify keeping the patient in bed for many months together, thus losing the advantages universally admitted as of great importance in the treatment of all other wasting diseases—the advantages of sunlight, fresh air, and exercise. While thus kept recumbent, extension is applied by means of a weight and pulley, adjusted at the foot of the bed, while the head of the bed is lowered so that the weight of the body acts in counter extension. My observation goes to show that the cases most in need of rest for the joint, fail in obtaining it satisfactorily in this manner. For its successful employment the patient must be constantly upon the back in one position. Movement to one side or the other disturbs the line of traction and interferes with the rest which the joint should have. Every movement causes the amount of traction to vary, thus making the effect of the apparatus a changing quantity, and therefore preventing rest. The muscles, thus irritated into frequent efforts, make necessary the use of a much greater weight than would be required if the traction were constant. When the means employed for procuring extension are such that all the attachments are

made to the patient and none to the bed, then, when the patient moves, the appparatus moves also, and the relation between the points of attachment for extension is a constant one, and the force exerted unvarying, no matter how the patient may move. I wish to illustrate this point by a reference to cases 4 and 5. In case 4 extension by means of weight and pulley had been employed for some time, but the discomfort was so great that the mother was constrained to allow relief at times by its removal. The muscles stoutly resisted the weight and the leg was kept flexed. There was elevation of temperature, restless nights, poor appetite, and steady decline of the patient's condition. Three days after the splint was applied the following note was made: "Splint worn with much comfort, readjusted to-day, and extension made in the line of the axis of the body; sleeps better, appetite and spirits improved" (when first applied the leg was left flexed at an angle of 150°, and extension made in the line of the deformity). Immediate and uninterrupted improvement has marked this case since the splint was applied. The mother reported that the little girl slept better the first night after its application, though the force making extension was not half that employed previously.

In case 5, a young man, extension by weight and pulley had been employed for many months, and for some time previous to my first visit had been used intermittently. The leg and joint were extremely tender, and the patient unable to do anything to help himself. Within a few days from the time when the splint was applied making moderate extension—not more than two pounds—he was able to rise from the bed or couch without assistance, and to walk without discomfort. Since that time his course has been one of steady improvement, except for a few days, when his splint was broken and had to be taken off. He went to bed, and extension was applied by means of weight and pulley, with the result that his rest was unsatisfactory, and that there was an increase of tenderness in the leg. A return to the splint gave relief as at first. I do not believe that rest for the muscles and other structures about the joint—true physiological rest can be obtained by the use of a weight that will tire out the muscles and compel them to relax. The condition in any vital organ is the very opposite of that of rest under such circumstances; it is not rest, but exhaustion. If it be granted that the force of extension overcomes the muscular contraction, and that they lie passive thereafter, still no rest for the joint is thereby secured, for the ligaments or other structures about the articulation must now mount guard and do duty in resisting the force that had overcome the muscles. The ideal condition of rest is attained when no structure about the joint is called to exertion; and a very slight force that is constant and that secures the movement of the limb in harmony with the body is sufficient for this purpose, and is better than any device having some of its attachments to the body and some to a stationary object other than the body. While it is granted that there are circumstances under which it is good treatment to keep the patient confined to bed, yet the time so spent should be as short as possible, and it should not be admitted as good treatment except while correcting deformity, becoming accustomed to splint, recovering from the effects of operation or for other purpose requiring but a short period of confinement.

By means of a portable fixation apparatus more complete and effective rest can be obtained for the diseased structures than can be secured by keeping the patient in bed. By its uses better hygiene can be employed, and the ennui may be avoided that is the necessary comcomitant of weeks or months of lying in bed.

The kind of apparatus employed is of great importance, as will be seen by comparison of some of the splints before us.

I shall describe only two splints; these, in my opinion, embody the principles in construction that enable us most successfully to meet the indications for treatment. First, I shall describe the American portable traction splint—a modification of that introduced to the profession by Davis, and enabling me, better than any other one instrument would do, to describe the American methods of treatment.

Fig. 4 shows this splint in use. The band about the pelvis is iron, padded and covered with leather. It must be strong enough to carry the weight of the patient, and yet be such that it may be moulded to fit the body. The stem is steel and fixed immovably to the pelvic band.

In fig. 5 the stem is $\frac{5}{8}$ in. by $\frac{5}{8}$ in., the nar-

row part being placed toward the leg. The perineal straps are attached in front and behind in such a way that they may be shortened by aid of buckles. The stem is carried three or four inches below the foot, and a part bent at a right angle is shod with leather, and comes into contact with the ground. The other foot requires a boot with a patten or thick sole to correspond with the stem. Strips of adhesive plaster are secured to the thigh and leg, by bandage and buckles attached at the lower ends, so that straps attached to the foot-piece may be employed to make extension.

It acts as a perineal crutch, the weight of the body falling on the perineal straps is transmitted through the band to the stem, and the foot-piece, which is the part of the crutch in contact with the ground. The stem is secured immovably to the pelvic band, and the leg is secured to the stem by two straps. The weight of the body coming alternately upon the sound leg and upon the perineal crutch, the entire leg, from the toes to the hip joint is kept from jar or concussion, because the foot piece at the end of the stem extends three or four inches below the foot so that the diseased limb does not come into contact with the ground. The sound limb is raised to the same level by a patten of the required height. It may seem that in walking, flexion and extension must cause movement at the joint; but if it is considered that the entire splint is jointless, it will be seen that movement of the limb cannot occur unless the perineal straps move backward and forward upon the surface of the perineum, or the soft parts move with the straps upon the bones beneath. That the former of these does not occur, is attested by the fact that patients walk about every day bearing the entire body-weight upon the perineal straps without any inconvenience—a thing quite impossible if at every step the straps were being drawn like saws over the surface of the perineum. Though some movement of the soft parts upon the bones does, no doubt, occur, yet it is so slight and so infrequent that practically this splint secures a condition that very closely approaches complete rest for the joint. The movement in flexion and extension occurs in the lumbar region. The traction, which occurs through the straps attached at the foot of the splint and buckled into the adhesion-plaster secured to the sides of the leg by bandages, further aids in fixing the joint.

The muscles around every inflamed joint are on guard to prevent movement, and by their contraction injurious intra-articular pressure is caused. The most potent agent for doing away with injurious muscular contraction is such fixation as will prevent movement, and therefore take away the necessity for the muscles being constantly on the alert.

No means ever employed is more effective for the accomplishment of this end than the Thomas posterior hip-splint.

The Thomas splint (Fig. 7), as I employ it, consists of two iron bands, one to go about the upper part of the chest, and the other about the pelvis, and having an iron stem fixed to these bands behind, and extending down over the gluteal region and the posterior aspect of the diseased leg. This stem is to be bent to correspond to the deformity, and then securely fixed by bandages to the leg. All parts of the splint are padded and covered with leather.

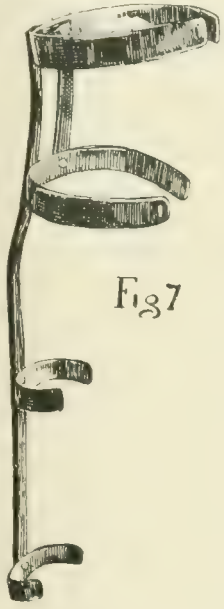

Fig 7

Many patients do not like it so well as the American splint, because of the necessity of using crutches while the Thomas splint is in use. The fixation secured by it is most complete, and as there is doubt whether traction for the purpose of extension accomplishes any useful purpose other than that of fixation, the objection brought against the Thomas splint that it makes no provision for extension does not seem to be well founded. Dr. Lovett, of Boston, showed at the last meeting of the American Orthopædic Association an addition made by him to the Thomas splint by which he was able to employ extension. By reference to case 1, it will be seen that I modified the Thomas splint in such manner as to make extension and to correct external rotation. When it is considered that the Thomas splint seldom weighs less than five

pounds and that it is held in its place, not by firm grasp about the body, but by being firmly secured to the leg, it will be seen that there is considerable extension weight constantly acting while in the upright position.

I seldom use the Thomas splint if a case is seen early, and there is little deformity or no fixed deformity. If it be such as arises simply from reflex contraction of the muscles, and disappears when the patient is under the influence of chloroform or ether, then I prefer the American splint. It gives satisfactory results, and is less objectionable to the patient and his friends. Cases 1, 3, and 6, illustrate fairly those in which I prefer the Thomas splint.

It presents one marked advantage in the treatment of deformity—it can be bent to fit a limb, however much it may be flexed or adducted. By the fixation it secures, muscular spasm soon subsides, and then the splint may be partly or entirely straightened and the limb secured in the improved position.

In cases where there is marked flexion with adduction or abduction, adhesions and contracted muscles about the joint, I prefer the plan adopted in case 3, viz., under an anæsthetic to cut the contractured muscles or their tendons, and bands of the adhesion, as far as possible, and then by the use of moderate force to correct the deformity, fix the limb in plaster of Paris till the wounds are healed, and then apply such splint as the circumstances demand.

Failing to correct the deformity by the means pointed out, it is better to perform osteotomy than to employ great force in breaking up the anchylosis, as in many cases, when much force has been employed, the old trouble has been lighted up with renewed violence.

The operative treatment, which may be set in contrast with the mechanical, will come under arthrectomy or excision. The former has not been often performed for disease at the hip, but is commended by McEwan, Barker, and Croft, as true conservative surgery. They operate in the early stages of the disease with the hope of eradicating the tuberculous process before much harm has been done to the joint structures.

Excision is a classical operation which has met with much favor, and one would expect that, under the impetus given to operative surgery by the introduction of antiseptic methods, this operation would show a record that would place it much beyond question. Some of the latest opinions from good authorities, however, are given against the operation. Howard Marsh thinks it unjustifiable in the early stages of the disease, and that it promises no better results than treatment by rest in the later stages—(Diseases of Joints, p. 319). Mr. T. Holmes says, "Excision ought to be very rarely, indeed, required, if the disease were treated properly in the commencement." Macnamara thinks that, if, after a careful trial of other methods in children, the case still does badly, then excision should be performed. In adults, if operative interference be imperative, he prefers amputation (p. 428). The report of the Clinical Society, before referred to in this paper, is adverse to excision unless other means have failed to secure the favorable progress of the case. (Macnamara, p. 429).

When matter is present it should be removed by aspiration or by incision.

SUMMARY.

The practice advocated in this paper may be briefly summed up:

1. Constitutional treatment, such as is employed in other wasting diseases, is of prime importance in all cases.

2. In early stages of the disease, treatment by rest for the joint is indicated.

3. Rest can be better obtained by employing a portable fixation apparatus than by any means requiring confinement in bed.

4. Deformity, if not fixed by adhesions or contractured muscles, may be corrected by the use of portable splints.

5. Deformity, maintained by contractured muscles and adhesions about the joint, may frequently be corrected by myotomy or tenotomy, and the adhesions broken up by using a moderate degree of force.

6. When deformity cannot be so corrected, osteotomy should be performed.

7. If faithful trial of these means fail to give satisfactory results, excision or amputation should be performed.

8. Pus, or sequestra, when known to be present, should be removed by operation.

DR. DOUGLASS has been appointed jail surgeon, in place of Dr. Clarke, deceased.

ECTOPIC GESTATION, WITH REPORT OF THREE CASES.*

BY T. K. HOLMES, M.D., CHATHAM.

Competent physicians differ widely in their estimate of the difficulties surrounding the whole question of ectopic gestation. Thomas says a positive diagnosis is generally difficult and often impossible. Hanks affirms that ninety-five per cent. of these cases can be recognized. Dr. Joseph Price says a differential diagnosis is extremely uncertain. Dr. Van der Veer says many cases give no symptoms until rupture occurs, and quotes Tait and Formad in confirmation of his assertion. I believe that he who has had considerable experience of these cases, and is familiar with the literature of the subject, will still feel the need of more light to guide him in his perplexity in a very large percentage of the cases he sees, and that absolute certainty of correct diagnosis is the exception during the first few weeks or before rupture occurs.

There always comes a time when it is easily recognized, but it is frequently after that knowledge has ceased to be of much value to the patient. My object in presenting this short paper is to keep an important subject before the profession here, and to gain for all whatever a discussion may reveal. My experience is limited to what the management of three cases affords, and as the subject has been attracting much attention recently, both here and in Europe, I have thought this a favorable time to arrange my notes, and to detail some points in my experience. Few subjects are of greater importance to the general practitioner, because he is liable to meet these cases quite unexpectedly, and unless prepared to diagnosticate the condition, and to adopt promptly the best plan of treatment, he cannot hope to see any of them recover. On the other hand, a correct diagnosis at a time when to be right is of the utmost importance, and the adoption of one or other of the recognized methods of treatment, ensure the saving of much suffering and many lives.

The obscurity and doubt connected with these cases should only serve to arouse every physician to greater care, and to the avoidance of hasty and superficial investigation of cases, that may involve such dreadful consequences.

When ectopic gestation occurs, it is because of an abnormal condition of some of the female generative organs, although it may not always be possible to know what this is. It is probable that any change that prevents or retards the movement of the unimpregnated ovum towards the uterine cavity, so as to allow time for the migration of the spermatozoa beyond the normal place for impregnation to occur, is a common factor. Such influence is exerted by desquamative salpingitis, pelvic cellulitis, uterine flexions, and other ailments that favor sterility, which it is well known often precedes this form of gestation. It seems very probable that the destruction of the ciliated epithelium of the tube, which occurs in salpingitis, is a common cause of tubal pregnancy, by retarding the ovum and by affording a surface for development more nearly resembling the endometrium. Whatever the cause may be, it is admitted by all that the fœtus may be developed in any part of the tube, in the muscular walls of the uterus, or that it may be sustained by attachment to the abdominal viscera. Ovarian pregnancy is admittedly very rare, and some good authorities deny its occurrence. It is possible that the ovum may be attached so near the uterine end of the tube that it may enter the cavity of the uterus, and be discharged *per vias naturales*, but when it occupies this position it more frequently distends the tube and uterine tissue upwards, until it ruptures into the peritoneal cavity, when in consequence of the great vascularity, death of the patient invariably, or almost invariably, results from hæmorrhage, before surgical means can be undertaken.

Extra-uterine tubal pregnancy is the variety of the greatest interest to the surgeon, because it is almost the only form he is likely to be called upon to treat, and the one that offers good hope of successful results. Mr. Tait's views as to the pathology are so reasonable that it is difficult to doubt their correctness, and supported as they are by his great experience, I feel bound to adopt them. He believes that a fœtal ball developing near the middle of the tube terminates in one of two ways: it either ruptures into the general peritoneal cavity, directly, or into the broad ligament between the folds of peritoneum of which it is composed. In the former case, the conditions favorable to coagulation being absent, hæmorrhage goes on

* Read before the Detroit Medical Society, April [illegible]

unchecked until death occurs, or until surgical interference arrests it; while in the latter case conditions favorable to coagulation obtain, and hæmorrhage is less likely to prove fatal. In the former case the blood is so diffused as to give very uncertain physicial signs of its presence; in the latter case the blood is clotted, circumscribed, and can be recognized as a distinctly defined tumor; in the former the ovum always dies, in the latter it generally dies at the time of rupture.

Success in treatment will depend upon correct diagnosis before rupture takes place, and I believe most cases can be made out pretty certainly before that accident happens, if sufficient care be exercised in the investigation. Physicians see comparatively few of these cases, and the subjective symptoms not being very characteristic, it is not surprising that so many go on to a fatal end without a serious effort to solve the difficulty. Irregular menstruation and pelvic pain are the most common subjective symptoms, but these pertain to women so commonly that one is led to prescribe without a physical examination being thought necessary, and in the meantime, while we are waiting for our drugs to set matters aright, our patient is approaching a catastrophe that has no parallel in life. He who would be right in these cases must be willing to bring all care and thoughtfulness to bear on them, and must not be satisfied with a few superficial questions and a haphazard prescription. The subjective symptoms are usually well enough marked to direct attention to the possible affection, and should lead to a thorough physical examination when the true condition may become known. Pain is not confined to the place of fœtal development, but may be felt most severely about the rectum or along the nerves of the thigh. In one of my cases the first complaint was a severe pain extending from the kidney to the iliac fossa, and it gave me the idea that it was due to the passage of a renal calculus. When the growth of the fœtal mass has become sufficient to cause pain, there is usually a good deal of tenderness there on pressure, and this may interfere somewhat with the examination, but even with considerable tenderness, an enlargement may generally be felt by palpation in the region of the distending tube externally. There can be felt, per vaginam, an enlargement at one side of the uterus, and a bulging downwards of Douglas' *cul de sac*, the whole enlargement conveying a sensation of bogginess, not having the hardness of a fibroid, nor the softness of an abscess or a cyst. The uterus is somewhat enlarged, pushed to the opposite side, and the cervix is often crowded upwards behind the pubic bones.

As growth goes on, these physical changes become more marked, symptoms due to pressure are more distressing, pains become paroxysmal, blood may flow from the uterus, the whole or portions of the decidua may be discharged. Rupture usually occurs between the tenth and fourteenth week in the more common form of extra-uterine fœtation, and the symptoms then are truly appalling.

The patient is suddenly siezed with violent pain in the abdomen, she becomes pale and cold, an indescribable look of anxiety and distress marks her countenance, her pulse fails, and she is evidently in the very jaws of death before her terrified friends can summon aid. If she survive the shock and the hæmorrhage, she slowly rallies after some hours, and the subsequent progress of the case will depend on circumstances. If the fœtus die it may become absorbed, or may be converted in a lithopedium, or the bones may undergo a change by saponification into adipocere. Fatal peritonitis may supervene, or an abscess may form and discharge externally. If the fœtus live, it may go on to full term, or a repetition of the collapse may occur from a fresh rupture, and another hæmorrhage.

It is stated by writers that patients usually think themselves pregnant, but not one of those under my care could be convinced that she was so, and I feel doubtful if a patient's statements in this respect are of much value from a diagnostic point of view. Having, by direct means, reached the conclusion that ectopic gestation exists, the diagnosis may be more thoroughly established by indirect means. It is often easier to decide what a thing is not than to tell what it is, and by a process of exclusion, we may eliminate all, or nearly all, of the conditions that resemble this, and so fortify our position, and facilitate the subsequent management of the case. Ovarian, parovarian and fibroid tumors

have histories of their own, and cellulitis, suppurative or otherwise, pursues a course peculiar to itself, and not likely to be mistaken. Other conditions, such as abscess of the tube or broad ligament, pelvic hæmatocele, dermoid cyst, retroversion of the gravid uterus, may perplex us, but they all have distinctive characteristics, and may be eliminated from the list of possible conditions. Of the various methods of treatment, only two are worthy of consideration, viz.: 1st, destruction of the life of the fœtus by electricity, and 2nd, removal by abdominal section. Each has its advocates, and both have afforded good results.

Circumstances connected with individual cases should determine the treatment. A patient with unsanitary surroundings and an unpractised surgeon, other things being equal, would be more likely to recover under the electrical treatment, whereas a laparotomy done under favorable circumstances, and by a skilful operator, offers probably as good a chance of primary recovery, and a better chance of escaping secondary complications. These remarks apply to all cases before the twelfth week which have not ruptured.

Views which I now entertain, but which greater experience may induce me to modify, lead me to the following conclusions: If the diagnosis be pretty certain before the twelfth week, and before rupture seems imminent, use electricity. If rupture occurs, and symptoms indicate arrest of hæmorrhage and probability of rally from shock, wait for reaction, and then perform laparotomy. If symptoms point to continuation of bleeding, open the abdomen and control it in the only way possible, *i.e.*, by ligating the vessels in the broad ligament. If the fœtus be dead, and there are indications of danger from its presence, open the abdomen and remove it.

Case 1. March 16th, 1886. Mrs. J. A. H., æt. 39 years, has a good family history, and is a large, well-developed woman. She has had two children, aged respectively 15 and 17 years, and no miscarriages.

Four years ago I performed perineorrhaphy for laceration that probably occurred at her first labor. She had retroversion of the uterus which, owing to adhesions, resisted all forms of treatment.

On March 16th, 1886, I was called to see her on account of a sudden attack of severe pain in the rectum, from which she soon recovered, but continued to complain of pain and great tenderness in the right iliac fossa. Palliative treatment was used, and after the tenderness abated somewhat, a distinct enlargement could be felt in the right iliac fossa, and a vaginal examination revealed a tumor on the right side of the uterus, the neck being pushed to the left, and there was a great fulness in Douglas' *cul de sac*. After watching the case a few days longer, I expressed the opinion to her and her sister that she was suffering from extra-uterine pregnancy, but the patient assured me that there was no possibility that she was pregnant, and that some other cause must be sought for her illness.

The menses had been regular, but this was not an uncommon thing in her case, and after careful consideration I still felt uncertain as to her true condition.

I asked for a consultation, and Dr. Donald McLean, of Detroit, was selected, but the next day, and before Dr. McLean was sent for, she was seized instantaneously with severe pain in the abdomen, and her friends thought she was dying. I saw her fifteen minutes later, and found her pale, cold, and pulseless, and apparently in a dying condition.

Hypodermic injections of ether, and the use of morphine in the same way, were used, and after a few hours reaction set in, the deadly hue passed partially away, the pulse returned at the wrist, and the immediate danger was over. Dr. McLean saw her in this unfavorable state, and it was decided to wait a short time for further rallying before attempting an operation.

There was some improvement for the next five days, but a rise of temperature and some nausea then began to be observed, and it was thought unsafe to wait longer.

Dr. McLean was again sent for, and performed abdominal section. The operation was quickly and, I need not say, skilfully done, but owing to her long illness and great weakness, she did not rally well after the operation and died next day. The extensive and firm adhesions made the operation unusually difficult, and altogether the case was a very unfavorable one for a surgeon to deal with. The enlarged, tender, and retroverted uterus from which this lady had long

suffered, the pelvic pain that had tormented her for years, and my own want of familiarity with ectopic pregnancy, all combined to delay a correct diagnosis, and when I had made up my mind as certainly as I could regarding the true condition, I allowed the patient's assurances to unbalance my decision until rupture occurred, and after that I believe any plan of treatment must have failed in her case. Adhesions were so extensive and so firm that complete removal of the sac was impossible, and the placental tissue was carefully separated and removed, and a drainage tube put in after the whole cavity had been thoroughly irrigated.

I think the rupture occurred into the broad ligament, for the sac still contained the amniotic fluid, which would not have been the case if rupture had taken place into the peritoneal cavity. There was complete adhesion between the visceral and parietal peritoneum at the point of incision, and the fœtus escaped with the first gush of amniotic fluid. It was, I think, about fourteen weeks old.

Case 2. Mrs. J. N., æt. 39 years, good family history, married, and has had two children, the younger born twenty years ago, and her confinement then was followed by a long and severe attack of fever. In 1887 there was a history of ectopic gestation, from which she gradually recovered without treatment directed to that condition. The uterus remained fixed and Douglas' sac full and hard, but her general health improved, and she remained pretty well until September, 1889, when she had what her physician considered acute gastritis, and from which, under his care, she recovered. Pain and swelling in the iliac fossæ next set in, and it was on this account that her attending physician placed her under my care about three months before she died. There was a hard mass on each side of the uterus easily felt externally; the uterus was immovable, the cervix being pushed far up behind the pubic bones, and the whole pelvis was filled with some solid substance.

The history of the illness in 1887, and the present condition of the pelvic organs, led me to the belief that ectopic gestation had existed then, and that the presence of the dead fœtus had set up the condition described. Two days after she came under my care, there passed from her while urinating the substance here exhibited, and which will be seen to resemble fœtal bones that have undergone change into adipocere. The discharge was attended with great pain, but although I questioned her closely, she could not tell whether it came from the vagina, the rectum, or the bladder. It was covered with mucus and some blood, and the nurse said she broke some of the larger pieces in attempting to examine them. After this she suffered almost constant pain about the lower part of the abdomen, the hard masses increased in size, the abdomen became greatly distended with gas, which could not be evacuated naturally, her strength gradually failed, and she died on the 15th of January, 1890.

The autopsy showed the whole of the greater omentum adherent to the anterior abdominal wall. It was about an inch in thickness, and could with difficulty be separated from the viscera it covered. The uterus and appendages, and indeed all the pelvic organs, were so matted together that it was impossible to discover with certainty evidences of the supposed ectopic gestation, but as the adipocere was discharged more than three months before the patient died, the locality it came from may have become obliterated. The uterus is somewhat enlarged, the left side much thicker than the right, and there is a cavity in the muscular tissue of the fundus near the uterine end of the tube. This may have contained the adipocere.

The left Fallopian tube contained half an ounce of pus.

I sent a specimen of the adipocere to Dr. A. B. McCallum, University of Toronto, for examination, and received the following reply:

Biological Dept., University Toronto,
April 3rd, 1890.

DEAR DR. HOLMES,—In regard to that specimen of adipocere, I can only say that, on examination, it revealed no definite evidence of having been derived from bone, although fine sections of the mass showed regularly here and there cavities which might be interpreted as the transections of the original Haversian canals. Outside of and between these cavities the substance was homogenous. Yours sincerely,

A. B. MCCALLUM.

Case 3.—

ECTOPIC PREGNANCY OPERATION AT 14 WEEKS —RECOVERY.

Mrs. H. J., æt. 39 years; married, and has had six children, the last 6 years ago. Came

under my observation on the 20th of October, 1889, when I was sent for, on account of a severe pain extending from the region of the right kidney to the right iliac fossa. The pain came on quite suddenly, and was accompanied by a constant desire to urinate. The symptoms were so much like those of a renal calculus that I thought that to be the ailment, and prescribed accordingly. There was no failure in the pulse nor any sign of collapse, and she soon got relief, but as this was only temporary, I determined on a more thorough examination two days later, and at once discovered a slight enlargement in the iliac fossa, and could feel per vaginam a tumor as large as a small hen's egg on the right side of the uterus. Douglas' *cul de sac* was full, moderately hard, and uniform in contour, and the cervix was pushed to the left slightly. She had menstruated normally seven weeks before, and had a slight discharge of blood a month later. There was pain down the right thigh, the temperature was normal, and in all other respects she felt well. Partly by direct evidence, and partly by exclusion, I concluded the case to be one of ectopic gestation, and Dr. McKeough, who saw the case, was of the same opinion. I thought it a favorable case for the use of electricity, but after explaining the nature of the complaint and the proposed treatment, the husband and family declined to have it done, and sought other advice, so that for about six weeks I lost sight of the case, not hearing anything of it until December 6th about 10 o'clock in the evening, when I was asked to see it. It had undergone great change, the tumor being much larger, extending beyond the median line, and nearly as high as the navel. The cervix was pushed far to the left, and Douglas' sac was bulging very low in the pelvis; there was discharge of blood from the vagina, and I learned there had been intermittent pains all day, and that a complete decidua had been discharged in the evening; the patient was pale and depressed and the extremities cold; warmth and stimulants were used, and at 2 o'clock p.m. on the 7th I made an incision five inches long in the median line below the umbilicus, and at once saw a small rupture in the upper part of the sac, near the end farthest from the uterus. It was not larger than a pencil, and was occluded by a dark clot. It was in direct communication with the general peritoneal cavity, and about a pint of clotted blood lay among the intestines in the vicinity of the rupture. I separated the sac from surrounding structures to which it was adherent, tied the tube and broad ligament close to the uterus, and cut the mass away.

The clots were removed and the cavity repeatedly washed out with warm water that had been boiled, and when the abdominal cavity was clean the wound was closed and covered by bichloride gauze, and a bandage put on. No adhesive straps were used, nor was a drainage tube inserted. The sutures were removed on the seventh day, and recovery was so rapid that she dined with her family on New Year's Day, or less than 3 weeks after the operation.

On examination of the sac, which I here exhibit, it showed the placenta attached to the upper side of the uterine end of the tube, and the rupture also on the upper side of the tube, but near the distal end. The wall is extremely thin at the point of rupture, and doubtless this thinness and consequent diminished vascularity, together with the smallness of the tear, favored spontaneous arrest of the hæmorrhage. I think also that the sac became filled with blood, and that its coagulation there, and its pressure from within, contributed to a same fortunate result. There was no amniotic fluid in the sac. Thomas says: "I know of but two cases of recovery after a rupture of an ectopic sac in this country. One of these occurred in the practice of Dr. Johnson, of Danville, Ky., and the other in that of Dr. Gordon, of Portland, Me."

Drs. McKeough, Tye, Fleming, and Backus, and Mr. Pearson, were present and assisted at the operation.

Selections.

UNNA ON A CASE OE TUBERCULOSIS CONVEYED BY EAR-RINGS.—A girl, ætat 14, of a healthy family, who became infected with tuberculosis by wearing ear-rings which had previously been worn by a woman who died of pulmonary consumption. Flat ulcers with undermined borders developed in the lobes of the ears, especially on the left side. There was also swelling and induration of the cervical glands on the left side, and dulness over the apex of the left lung. Tubercle bacilli were found in the granulations

of the ulcers and in the sputum. Acute phthisis supervened, to which the patient succumbed.—*London Med. Recorder.*

ANTIPYRIN is said to have a wonderful influence in increasing the solubility of caffeine, as well as of the salts of quinine. In this respect it resembles the action of sodium benzoate and salicylate. Twenty grains of caffeine and thirty grains of antipyrin form a perfectly clear solution with sufficient water to make 1 fluid oz. The combination might be found of service in the treatment of neuralgia and migraine.—*Medical Press and Circular.*

DIURETIC ACTION OF THEOBROMINE.—Gram in the *Therapeutic Monatsch*, sums up thus:

1. Pure theobromine is with difficulty absorbed. When absorbed, it is a powerful diuretic, without acting on the heart. The diuresis is the result of a direct action on the kidney.

2. The salicylate of theobromine and soda is easily absorbed; it is a powerful diuretic, and not toxic. Only once, and then in a very weak patient, did it cause a slight vertigo.

3. The usual daily dose of the salicylate of theobromine and soda is about a drachm and a half. At one dose, more than 15 grains should never be given.

TRANSPLANTATION OF THE THYROID.—Lannelongue, arguing from the success which Horsley has had in preventing myxœdema after thyroidectomy, by grafting a portion of the thyroid in some other part of the body, thought that he might, by the same procedure, be able to ameliorate the defective mental and corporeal condition of those unfortunates who were born without a thyroid. He has, on a girl of 14, presenting all the appearances of myxœdema, grafted part of the thyroid of a sheep. The result of the experiment will be looked forward to with much curiosity.—*L'Union Médicale*, March 15, 1890.

CHLORALAMIDE.—Rosenthal, in the New York *Medicinische Monatsschrift*, relates his experience with this drug in 28 patients, to whom 14 ounces were given in 185 doses. He obtained the best results in cases of nervous disease; it was useful in chronic cystitis, cancer of the stomach, and diabetes mellitus; little or no benefit was obtained in the emphysematous, the asthmatic, and the phthisical. Chloralamide is to be preferred to sulphonal, if a speedy effect is desired; in most of his cases the patient was asleep within an hour of the administration of the drug. As chloralamide has scarcely any effect on the heart or respiration, it is a better hypnotic than sulphonal in cases which have any disposition to collapse. In two or three cases, slight headache and giddiness were complained of. The average dose is 45 grains; this should be given an hour before sleep.

SALICYLATE OF SODIUM IN GENERAL PRURITUS.—Dr. Wertheimer, in the Müuchener Medicinische Wochenschrift, advises the treatment of general pruritus by means of a three-per-cent. solution of sodium salicylate, in doses of a tablespoonful thrice daily. This plan of treatment, he says, may be continued for some time, in the confident belief that it will not only promptly moderate the unpleasant pruritic symptoms, but also radically remove the underlying disease.—*N. Y. Med. Jour.*

ARTIFICIAL TONGUE.—Dr. Poncet, of Lyons, has invented an artificial tongue for improving articulation in cases where that organ has been extirpated. The apparatus consists of a "pocket" of soft rubber containing fluid, and jointed on to a plate which is fixed to the lower teeth. "A patient wearing this apparatus can eat and speak quite satisfactorily, and there is no dribbling of saliva, the latter being swallowed as in health."—*Edinburgh Med. Jour.*

METHACETINE.—Mahuert says that a dose of 4 to 6 grains lowers the temperature, and may be repeated two or three times a day. Perspiration occurs in fifteen to thirty minutes afterwards; the fall of temperature lasts two o three hours, when it again rises to its former height. The heart is not at all weakened, the blood pressure is increased, there is no change in the red blood corpuscles. In acute articular rheumatism, methacetine has not proved more efficacious than phenacetine. It relieves the lightning pains of tabes, headache, neuralgia, and chronic rheumatic pains.—*La Cronica Medica, Feb. 5th, 1890.*

ARISTOL IN SKIN DISEASE.—Aristol is made by combining iodine and thymol, *i.e.*, a solution of iodine in iodide of potassium is mixed with an alkaline solution of thymol. A reddish brown precipitate is formed, which is amorphous—aristol. It is insoluble in alcohol, glycerine, water; slightly soluble in ether and in oils. The advantages which this remedy possesses are an absence of toxic action, no odor, and easily applied. It is said to work well in cases of psoriasis, although its action is slow. The author claims for it a quicker and safer action in mycotic diseases; and it is particularly valuable in tertiary syphilitic ulcerations. In lupus its action is more thorough than that of any other remedy. If the foregoing be correct, there is a great future for this remedy, as the great advantage it possesses is its want of toxic properties. It may be used in the form of ointment, in the strength of 10 per cent. or more. Care should be taken to keep the drug itself in black glass bottles. In chancroid, the use of aristol has proven a signal failure.—*St. Louis Med. and Surg. Jour.*

A PECULIAR CASE OF EXTRA-UTERINE PREGNANCY.—A few days ago, Dr. Rosthorn, assistant at Professor Chrobak's gynecological clinic, operated on a case of apparent ovarian cyst. Eight weeks before, the woman had been delivered of an eight months' child, normal labor, and had been perfectly well until three weeks previous to the operation. The operation was made in the ordinary way, and the supposed cyst removed. At one portion of it a peculiar cord-like process was attached. Rosthorn examined the other ovary—it was normal—but, while examining it, a small hand slipped out from between the intestines. This was seized, and a full-sized child was removed from the abdomen, and to its umbilicus was attached a cord exactly similar to that found on the cyst. They then looked for the fœtal membranes, and found them very deep and everywhere adherent to the intestines and peritoneum. The child's skin was nearly normal, though slightly macerated. Then the membranous sac was brought up and sewed to the peritoneum, just as the stump is treated in extra-peritoneal amputation of the uterus; the abdominal walls were united, and the sac dusted with salicyltannin. The woman rallied, and now, seven days after the operation, is doing very well. A careful examination of the removed cyst showed that the tumor was merely the placenta coiled up, where it had been fastened to the left Fallopian tube, and the case now resolves itself as follows: There was an extra-uterine pregnancy, with the fœtus in the left Fallopian tube, and this fœtus was carried beyond term, and died. Throughout the time there were no symptoms from this extra-uterine pregnancy, and an intra-uterine pregnancy went on nearly normally at the same time. It cannot be established, though it is probable, according to the authorities here, that the two children were really twins, and one developed within, the other outside of, the uterus. Thus it stands without a parallel in the history of obstetrics, and the full report by Rosthorn will be looked forward to with great interest.—*Medical News, Vienna Letter.*

TUMOR OF THE PANCREAS, LAPAROTOMY, RECOVERY.—Patient, German, 45 years of age, mother of five children; good family record. About a year ago she was attacked with occasional spasms of the stomach, and one unusually severe attack was followed by gastric inflammation and then chronic gastritis. The latter was accompanied by constant vomiting of food, tinged with blood. Clotted blood occasionally passed from the bowels. For some weeks no notable change from the above symptoms occurred, except increasing emaciation. Six or eight months after the first symptoms the abdomen gradually swelled, until the body was enormously enlarged. At this time I, in my casual examination, thought it a case of ascites, dependent upon organic changes. Later, finding the heart sounds normal and the urine healthy, I examined her more closely, and diagnosed an abdominal tumor, probably from the pancreas, and concluded to tap her to verify the diagnosis.

After withdrawing the fluid, which was of a dark coffee color, containing numerous small bodies resembling hydatid degeneration, I found a growth in the epigastric region, extending over into the left hypochondrium. The tumor was hard, smooth, and globular, and could be freely moved about, but on respiration there was only slight movement of the growth.

My conclusions, based upon the history of abdominal pain, the gastric irritation, the copious and constant vomiting (which disappeared in the latter stages, proving that the tumor, from its own weight, had dropped down, and was no longer in contact with the stomach), the increasing emaciation, the dark grumous blood ejected from both stomach and bowels, the fact that the tumor was nearly stationary on respiration, the pale yellow coloration of the skin, the fluid drawn in the tapping (dark brown, turbid, colorless, alkaline, specific gravity 1.012) the stools containing considerable fatty matters—were that the growth was located in the pancreas.

When the abdomen was opened, the tumor was found closely adherent to the omentum. the transverse colon and stomach being bound to the latter by a fibrous attachment several inches long. A ligature was thrown around the attachments and the tumor removed entire, including the tail of the pancreas.

The case progressed satisfactorily, and the patient now attends to the household duties, and has gained several pounds in weight.

Microscopic examination shows the specimen to be sarcomatous, although there is evidence of a pre-existing hydatid, shown by the hooklets of that tumor with the cells of the spindle-celled sarcoma. Dr. James also found hydatid débris in the liquid first submitted for examination.—*Waldo Briggs, M.D., in St. Louis Med. and Surg. Jour.*, March, 1890.

ORIGIN OF DIPHTHERIA.—The identity of diphtheria with the disease of chicken, known as pip, has been very vigorously opposed. Nicati published in *Marseille Médicale* (1879, page 105), cases showing the transfer of contagion from chickens to children. Meuziès, Dethil, Pamard, Bouchard, and Tei ier, published observations favorable to this opinion; Meuziès asserts on his personal observations that diphtheria is caused by the dejections of fowls. In Italy, Escolami and Pietra Santa assure us diphtheria among fowls is common. On the housetops many flocks of turkeys, chickens, pigeons, and rabbits, take up their residence, the excrements of which, washed by the rain, are carried into the wells containing the drinking-water of the people. In 1871, in Posilipo, near Naples, Meuziès saw an epidemic of diphtheria attack the children of a colleague whose house and yard presented the above mentioned conditions. Of five children, four became sick and died. In another house there was a large dovecote; in that house a lady and four or five children were attacked by diphtheria, and three died. From these cases, the epidemic spread and became generalized.

The unfortunate professor, convinced that the diphtheria was due to the use of contaminated water, forbade his servant to use the water from the suspected well for culinary or drinking purposes, and ordered him to go to a neighboring well to get pure water; but the laziness of the servant defeated his purposes and caused an epidemic of diphtheria. The only child that did not fall sick was a suckling infant, who did not drink water; and a neighbour's child of seven years, who did drink the well water, took sick and died. Meuziès thinks that in every epidemic of diphtheria it is reasonable to seek the source of the trouble in neighboring chickenyards, dovecotes, dungheaps, and, above all, in barnyards and deposits of manure. The island of Skiatos, on the north of Greece, inhabited for about fifty years, has a population of about 4,000, and, with the exception of some fevers, it is very salubrious. Bild, in a practice of thirty years on the island, had never seen a case of diphtheria. But a flock of turkeys was brought to the island, and among them were several that clearly had diphtheria, of which they died; in a few days the disease attacked children, and rapidly spread over the whole island. 125 persons were attacked; the deaths were 36 during the summer and autumn of 1884. The objection raised by Liebermeister must be borne in mind, viz.: that diphtheria chiefly ravages cities and large communities in which there are no barnyards, chicken-coops, or pigeon-houses, and that the false membranes cast off by the sick birds are scattered over the fields in the country, where they are at the mercy of the first urchin who plays in the sand. From these facts we must conclude that the belief in the identity of the diphtherias of man and birds rests upon accidents which rarely occur, considering the frequency of both diseases.—*New Orleans Med. and Surg. Jour.*

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

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TORONTO, APRIL 16, 1890.

THE WOMAN'S MEDICAL COLLEGE.

The Woman's Medical College, of Toronto, appears to be thriving. Its new building on Sumach Street, opposite the General Hospital, is about completed, and will be opened by a conversazione immediately before the commencement of the summer session. Its candidates at the various examinations are, as a rule, doing creditable work. There were 28 students in the school during the past session. It is expected there will be a large increase next year, as the secretary is receiving an unusual number of enquiries from various parts of Canada and the United States. The medical education of women has never been particularly popular with the profession in the country, nor, at the same time, has it met with any decided opposition. It appears to have come to stay, as far as Toronto is concerned at least.

SPRING EXAMINATIONS.

The examinations this spring do not present any very striking features. Those of the University of Toronto are probably the most thorough and practical in this province. The laboratory and hospital examinations in this institution have long been very satisfactory, and are improving from year to year. The examinations in clinical medicine and surgery, as recently conducted by Drs. McPhedran and O'Reilly, assisted by Drs. W. P. Caven and Peters, in the Toronto General Hospital, were especially worthy of commendation. Last year complaints were made that sufficient time had not been allowed the students for this hospital work. The Senate thought the complaints were reasonable, and appointed the assistants mentioned, with results very gratifying both to Drs. O'Reilly and McPhedran and the students.

The examinations for the Medical Council commenced in Toronto and Kingston on Tuesday, April 9th. There are about 200 candidates in the primary subjects, and nearly the same number in the final. As usual they are, to a large extent, practical in character, and, taken on the whole, will prove satisfactory to the majority. The number of candidates are about the same as for the last two or three years. Among the universities, the largest graduating class will be from Trinity College.

THE MEDICAL COUNCIL OF BRITISH COLUMBIA.

We publish in this issue a letter from Dr. McGuigan, of Vancouver, which gives some particulars respecting recent legislation in the far west. He, as President of the Council, knows whereof he speaks, and we must accept his statements without any reservation, and, as a consequence, withdraw the charge of apathy in connection with that body.

Our medical men who went out to the Pacific coast last summer were favorably impressed with the apparent status of the profession, both on the Island and on the mainland. The medical register of British Columbia contains the names of many that are well and favorably known to us in the east. Its Medical Council is constituted and governed very much like that of Ontario, and we believe it will do much to raise and maintain a high standard in the medical profession.

One of the complaints raised against it is that it should assume to examine the graduates of reputable Universities in Canada and Great Britain, before granting them a license to practise. This may seem a hardship or even an absurdity in certain cases; but it is exactly the system which prevails in Ontario, and, with all its drawbacks, we have found that it has been productive of good. The history of medical education in Ontario has shown that certain of her Universities, by various devices, endeavored to make smooth the paths of medical students

and open wide the gates of graduation. Degrees promised to become cheaper from year to year. What the University of Toronto and the Ontario Medical Council have done in opposition to mill-grinding is too well known to need any lengthy explanations from us.

While we are quite ready to appreciate the good points connected with the workings of provincial councils, we have to regret that there should not be some bond of sympathy between the various sections of the Dominion. There should be either a central examining board for the whole Dominion, or reciprocity between the different Provinces. There are so many obstacles, especially in Quebec, in the way of the establishment of a central board, that it is at present almost out of the question. Reciprocity between this Province and all, or at least most of the others, might easily be obtained if Ontario were so disposed. We have a big wall of protection thrown round us, which will not allow any physician from the outside to practise in our Province. The rule is beginning to work both ways, and our registered practitioners are being kept out of other Provinces. Is it possible to establish a reciprocity which will be so surrounded with safeguards as not to interfere with the high standard we are now trying to maintain? It might be well for our Council seriously to consider the matter.

Meeting of Medical Societies.

TORONTO MEDICAL SOCIETY.

The President, Dr. Atherton, in the chair.

Dr. Atherton—

TYPHOID FEVER, WITH EPIDIDYMITIS, PAROTITIS, AND PHLEBITIS.

Young man of 18, was convalescing from la grippe, when he again became ill, and his temperature rose to 104.2°F. This was at first thought to be a relapse. Antipyrin reduced the temperature to 102°F. For five or six days the temperature ranged from 101° to 102.3°F. This was accompanied by considerable headache, and slight epistaxis. A diagnosis of typhoid fever was then made. About the end of the first week he had pain and swelling of the left epididymis, and also orchitis. He had, two years before, been struck on the testicles by a cricket ball. There was no diarrhœa. At the end of the second week rose-colored spots appeared. He then had phlebitis in the left leg, and during the third week a little diarrhœa. There was no great tympanites at any time. At the end of the third week he had pain and swelling of both parotid glands. At the end of the fourth week temperature fell to normal. During the whole course of the disease the temperature was irregular. Profuse perspiration. No gonorrhœa.

Dr. McPhedran—

HÆMOPTYSIS IN ACUTE TUBERCULOSI

A young woman of 20, a household servant, had always enjoyed good health. For a week she had been rather under the weather, but not sufficiently so to prevent her doing her ordinary work. She was suddenly seized with hæmoptysis, which lasted for two days before she came to the hospital. The hæmoptysis persisted until her death, the second day after her admission. The blood was now profuse, now scanty. Owing to her condition, it was, of course, impossible to make any physical examination. There could not be elicited from her any history of any lung disease. There was no wasting.

Autopsy did not show any bleeding points, so that the hemorrhage was probably of capillary origin. The lungs were found filled with miliary tubercles. On the outer surface of the middle of the lower lobe of the left lung, there was found an old thick-walled cavity, not communicating with a bronchus, and with greyish semi-liquid contents.

Diagnosis lay between acute tuberculosis, and the rupture of a vessel in a cavity of old lung disease, which had become quiescent. As there was no history of old lung disease, and a rapidly ascending temperature, from normal to 103° in two days, the probabilities were in favor of the acute disease.

ARTHRITIC HÆMOPTYIS.

The patient was an express driver, 51 years of age; a strong, robust man, a free drinker and liver, with a strong, tense pulse, and scanty, high colored urine. He was suddenly seized with profuse hæmoptysis—3 pints. This stopped spontaneously. In a few days he was again attacked, and was brought into hospital. His pulse was then very tense, urine scanty, and of

high specific gravity, and he was therefore given nitro-glycerine to relax the arterial tension, and magnes. sulph. to move the bowels freely. This had but little effect; the hæmoptysis continued for some days in small quantities, occasionally being quite profuse.

This would seem to indicate a local cause in addition to the general condition, so that this is not a true case of non-cardiac and non-pulmonary hemorrhage, as described by Sir Andrew Clark.

Dr. Price Brown remarked in regard to the first case that post-mortem examination frequently revealed the fact that there had been unrecognized tubercle in the lungs at some time, and that it had been cured.

Dr. Spencer spoke of the value of colchicum in arthritic hæmoptysis.

Dr. McPhedran said that the cavity in his case was most likely due to a previous broncho-pneumonia. Previously existing tubercle was usually denoted by cicatrices in the apex.

Dr. J. F. W. Ross presented a specimen of

PRIMARY CARCINOMA OF CORPUS UTERI.

The bladder was free, whilst the rectum was just commencing to be involved. When the case was first seen the disease was limited to the uterus, but the extreme age and debility of the patient, in his opinion, contra-indicated operation. Microscope showed the specimen to be a malignant adenoma, or carcinoma of the gland type.

EPITHELIOMA OF LABIUM,

removed by the knife from a patient of 84. The growth involved the clitoris, and there had been great pain. After the operation, the patient did well.

Dr. Geo. Acheson considered the first specimen very interesting, from a pathological standpoint, as being a primary carcinoma of the body of the uterus, a condition which was regarded as rare. There was no reason, however, why carcinoma should not originate there, for the uterus was provided with glands lined with epithelium, and a carcinoma was only a malignant adenoma.

Dr. Spencer asked whether it would not have been advisable to remove the uterus when the case was first seen. Dr. Ross said that the statistics of hysterectomy did not justify it.

DOUBLE UTERUS.

Dr. Spencer presented, for Dr. Bingham, a complete double uterus for a woman of 24, who had died of pneumonia.

Dr. J. F. W. Ross had seen a case of double uterus and double vagina. The patient refused operation, became pregnant, and bore several children without any difficulty.

OVARIAN TUMOR.

Dr. Cameron presented a dermoid cyst of the ovary, containing sebaceous matter, hair, and a single tooth—a cystic ovarian tumor, and a solid ovarian tumor, which had been associated with peritoneal effusion. There had been great difficulty in diagnosing whether this case was one of ascites, or of an ovarian tumor.

Hospital Reports.

OBSTRUCTIVE LARYNGITIS—TRACHEOTOMY—CONTINUANCE OF THE USE OF THE TRACHEOTOMY TUBE A NECESSITY—INTUBATION—RECOVERY.*

UNDER THE CARE OF G. R. M'DONAGH, M.D., L.R.C.P., LONDON, IN THE HOSPITAL FOR SICK CHILDREN, TORONTO.

W. M., æt. 2, male; admitted March 10, 1890. The child had la grippe during the last week of January, and a cough troubled him for some time after; he had never been subject to croup, although his brother (3½ years old) frequently had such attacks. The boy's cough caused his parents some anxiety, and he was carefully watched in order that he might not catch more cold; when allowed out of the house at all he was well wrapped up. As time went on, however, these precautions were not so strictly adhered to, and on February 1st, a day when a cold, raw, high wind was blowing, the boy was in his father's shop, and every now and then slipped out for five minutes or so, bare-headed and thinly clad. The father remarked at the time that he fully expected the boy to have an attack of croup in consequence of his indiscretion. During the evening he was coughing somewhat; at seven o'clock he was eating some raisins when he suddenly choked, and breathing at once became difficult; a doctor was summoned, who passed a probang down the

*Reported by A. Primrose, M.B., Edin., Surgical Registrar to the Hospital.

child's throat and thus induced vomiting, which completely relieved the patient. The little fellow fell asleep, and slept soundly until 10 p.m., when he awoke wheezing and breathing with difficulty, making a "rasping sound" during respiration. This wheezing got worse during the following day, and at midnight two doctors held a consultation, one of whom attributed the condition to inflammation; the other appears to have suspected the presence of a foreign body in the air passages, due, in all probability, to the raisins. Hot fomentations were applied to the throat, but his symptoms were not relieved. During the next two days his breathing became more and more embarrassed; he used to lie with his head thrown far back in order to ease respiration. On February 5th, four days after the onset of these curious symptoms, his condition became so critical that it was decided to attempt tracheotomy as a possible means of relief. Accordingly at 2.30 p.m. on February 5th tracheotomy was performed with an entirely satisfactory result, the breathing was at once relieved, and, with the exception of some annoyance occasioned by a difficulty in keeping the tube from getting clogged, the patient got on nicely, and no further difficulty was encountered.

After nine days an attempt was made to remove the tube, but dyspnœa was so marked that it had to be replaced at once in the windpipe. Two other unsuccessful attempts were made to remove the tube on subsequent days. The child was sent to the Children's Hospital, and was admitted under the care of Dr. McDonagh.

On March 12th, thirty-five days after tracheotomy, Dr. McDonagh examined the larynx under chloroform, but failed to detect any foreign body. O'Dwyer's tube was then introduced into the larynx, and the tracheotomy tube removed. He breathed freely through the laryngeal tube, but its presence caused an unusual amount of irritation, and brought about such constant and persistent coughing that at first it was thought that the tube would have to be removed; air was, however, entering the lungs freely. After a time the child got easier, and the cough became less and less troublesome, and he was left with the laryngeal tube in position. Next morning he was doing nicely, there was still a slight amount of irritation, but he breathed freely and he was able to take nourishment, consisting of milk, custard, and jelly, without difficulty. He continued in this condition until the morning of March 15, three days after intubation, when he coughed out the tube; he breathed freely for an hour and a half; when dyspnœa again came on, and the tube was replaced. At 5.30 p.m. he again coughed the tube out, and since then he has been able to get on without it. He remained in hospital for another week, during which time his breathing was normal whilst he kept calm, but if excited at all, he got somewhat hoarse, and had a slight difficulty in his respiratory efforts. He returned to his home in the country on March 22nd. In a letter from his father, dated April 10th, it is stated that the child is practically quite well.

REMARKS.

It is difficult, if not impossible, to arrive at an accurate conclusion as to the primary cause of this child's trouble. We have a history of a patient, previously weakened by an attack of the prevailing influenza, exposed to influences which would readily account for an attack of inflammatory croup; we have, in addition, a history of choking whilst eating raisins, and because of the sudden onset of the symptoms, we are led to suspect the presence of a foreign body in the windpipe. It is possible that both of these causes were at work, and produced a general inflammation about the larynx which eventually led to almost complete obstruction by swelling, possibly œdema, of the parts. The sudden relief at first obtained after vomiting, induced by the passage of a probang, may possibly be accounted for by the dislodgment of the foreign body, whilst the subsequent very gradual development of dyspnœa was probably due to a secondary inflammatory process.

The case is also of interest in showing that in intubation we have a valuable method of treating those troublesome cases in which a patient, after tracheotomy, cannot dispense with the tube, and finds it impossible to breathe through the natural passages.

DR. JENNY K. TROUT, of Toronto, has given $500 towards the new building of the Women's Medical College at Kingston, with a promise of $500 more in November.

Pathology.

VEGETABLE MICRO-ORGANISMS IN CARCINOMA.

The necessity of full (strict) compliance with the postulates of Koch in proving the pathogenic character of any micro-organism has, within the last two years, received a notable illustration in the failure of Scheueilen's work on the so-called cancer bacillus to stand the test when called strictly in question. Van Ermengem has shown that the so-called "bacillus of cancer" is no other than the "bacille rose," a common non-pathogenic form, which is frequently found in air, dust, soil, etc., and sometimes occurs as an accidental impurity in cultivations of bacillus tuberculosis. Repeated inoculations with pure cultures of this organism into dogs, guinea pigs, and rats, failed to affect their health in the least. This signal failure, however, has not frightened other investigators from the field. In the *Centralblatt für Bakter u. Parasiten* of Feb. 28th, 1896, is a condensed report of the recent work of Koubassoff on the "micro-organisms of cancerous new-growths." Koubassoff's investigations were made upon 6 cancers of the uterus, 1 of the breast, and 5 of the stomach. The report is of work done on the stomach cancers only. In all cases he met with a peculiar bacillus, of which he made pure cultivations, and afterwards performed inoculatory experiments therewith in order to determine the presence or absence of pathogenic qualities in it. Other varieties of bacteria were to be found, and often in great numbers, but this particular sort was con-tantly present, and attracted attention by its peculiarities. Koch describes the organism as being a rodlet from ½ to ⅓ as long as the bacillus tuberculosis, and three or four times as thick. In the tissues it is found to have one end pointed, the other wedge-shaped; whereas in cultures both ends become rounded. It is mobile—movements taking place in but one direction, and takes up anilin colors lightly. Endospores are formed centrally under certain conditions, and cultures grow upon almost any of the nutrient media used in bacteriological study. Growth is slow and ærobic, and takes place best at a temperature of 20°C. In all cases animals inoculated with pure cultures died, as did also those fed with the germ, the illness in the latter case being shorter than in the former. Guinea pigs died in one to two weeks, rabbits in one to two months, cats and dogs after two months. *Post mortem* examinations always showed the same results, viz., formation of nodules of greater or less size, sometimes ulcerated, sometimes not, occurring on the gastric and intestinal mucous membrane; sometimes in the liver, ovary, uterus, and spleen. The lymph glands in the abdominal cavity were also notably swollen, and were, at times, knotted together, at others, remaining separate. Histologically, these nodules are said by Koubassoff to resemble carcinomatous tissue. Symptoms of constitutional disturbance were also present, the most noteworthy being general emaciation, together with paralysis of the sphincters of the bladder and rectum. Whilst Koubassoff himself is evidently of the opinion that this bacillus which he has described is the cause of cancerous or, at any rate, some cancerous growths, the evidence is yet far from complete. Whatever the result of further investigation may be, certainly some very interesting additions have been made to our knowledge of mycology in connection with epithelial new-growths.

J. CAVEN.

PASSAGE OF MICRO-ORGANISMS FROM MOTHER TO FŒTUS.

Speaking with reference to the virulence of fœtal blood in cases where the pregnant mother suffers from anthrax, Sternberg (Backria, 1885) quotes Branell, Davaine, and Bollinger, as authorities for the statement that there are no bacilli to be found in the blood of the fœtus in such cases, and that it is non-virulent. He also says that Strauss and Chamberland have shown that occasionally an exception occurs, and the bacilli are found in the fœtal blood. Further, in speaking of symptomatic anthrax (Rauschbrand), the same author affirms that it is to be distinguished from true anthrax (Milzbrand) by the fact that the fœtal blood is virulent in it (Rauschbrand), and contains bacilli. Recently Simon (*Zeitschrift für Geburts u. Gynak.*), by microscopic observations, has found that the placenta does not form a "filtering apparatus" for the exclusion of micro-organisms from the

fœtus. His observations were made on cases of anthrax, and the bacilli were found not only in the amniotic fluid and on the surface of the fœtus, but even to a depth of several cell layers in the skin over the abdomen. Curiously enough no germs were found in the internal organs. The micro-organisms, however, were not in every case found invading the fœtal structures to the same extent, and only in cases noted as of "remarkably" long duration was the body of the fœtus itself invaded. The field of invasion varied according to the length of duration of the case, from the "maternal placenta" alone to the fœtal placenta, liquor amnii, and skin of the fœtus itself. These observations were made upon rabbits. The question, then, as to the virulence of the fœtal blood is still undecided, in spite of these investigations, since the mere finding of the bacilli, even in the fœtus itself, is no proof of their power of infecting. The fact noted by Simon, that there were none of the gross lesion of anthrax present, seems to point in the opposite direction.

J. C.

Correspondence.

Editor of CANADIAN PRACTITIONER.

It is to be hoped, now that some new blood has entered the Medical Council, that a move will be made towards its higher duties in connection with the practice of medicine. I refer to the establishment of an annual series of lectures, like the Gulstonian, Lumleian, and others. Scholarships for post-graduate work, original or experimental, and the printing and distribution by the Council of these to all members of the College of Physicians and Surgeons. I feel convinced that until some such return is made to the profession, the annual assessment will remain a source of discontent and a bar to the amity which should exist between the Council and its graduates.

I do not feel like taking up your space, or would write in more detail on the subject.

Yours truly,

J. E. WHITE.

Editor of CANADIAN PRACTITIONER.

SIR,—In the last issue of your JOURNAL, in speaking of medical legislation in British Columbia, you alluded to the rather unsatisfactory state of the Medical Act during the past year. What you said in that particular respect was all right, but when you go on to say that "the Medical Council was very apathetic in this matter" I assure you that you are entirely mistaken, and who ever informed you to that effect told you what was not correct. It would appear from your article that Dr. M. S. Wade, of Victoria, was the "champion" to whom the profession in British Columbia is indebted for the changes that have been made in the way of repeal of obnoxious and unjust sections of the Medical Act. As a matter of fact, Dr. Milne, our Registrar, and myself, as the two active officers of the Council, have been working incessantly since last spring to effect the changes that have now so happily been brought about, but we did so quietly, though none the less thoroughly, as the results show. We tried to obtain reciprocity with the General Medical Council of Great Britain, and that failing, we determined to ask for the repeal of the section in the Medical Act which allowed British graduates registered in Great Britain to practise in this province on the payment of a fee of only ten dollars for registration here, and we succeeded. I do not want to take any extra credit for what I did, inasmuch as all the other members of the Council did their duty in this respect faithfully and well. I may particularly mention Dr. John Davie, the brother of the Attorney-General of the province, whose aid was invaluable during the progress of the bill through the Legislature. Dr. Wade certainly wrote a pamphlet, and I have no doubt it had good effect in some quarters, but to claim that he did the work of the Medical Council is certainly ridiculous, and insulting to us as a body. Hoping you will give this insertion in your widely read JOURNAL, I am yours very respectfully,

W. J. MCGUIGAN.
President B.C. Medical Council.

Vancouver, B.C., March 13, '90.

Editor of CANADIAN PRACTITIONER.

SIR,—In THE PRACTITIONER of 1st March is a clipping from the *Popular Science News* minimizing the "danger of contracting consumption in sleeping cars, when the berths have previously been occupied by those afflicted with

the disease." The statement is made that, "There is little proof that the bacillus tuberculosis retains its vitality outside of the body long enough to infect another person under such circumstances."

This statement is sadly at variance with the experiments of authorities cited by Whittaker of Cincinatti, in the first volume of Sajous' Annual of the Medical Sciences for 1886. By these it has been proved, that the bacilli in dried sputa retain their viability for periods varying from three to six months: and that dust collected from the walls of rooms, where sputum cups had not been used, had been capable of transmitting the disease to animals experimented upon: check experiments were made in these cases.

I have not seen the "absurdly impracticable suggestions" referred to by the *Popular Science News*, but it would certainly not be too much to expect the railway people to provide cuspidores made of hard rubber or other noiseless material, and instruct porters to hand these at night to passengers afflicted with expectoration, instead of having the expectoration stored in a handkerchief, and probably smeared from it upon the mattress or upholstered head-piece. These could also be protected by being enclosed in a cotton covering, as is often done by the very careful housekeeper with the drawing-room furniture.

Railway managers are generally desirous (in these days of competition) of promoting the comfort and safety of passengers.

I do not know that it would be too much to ask that, in a case where a suspicious case has been in a berth, the car conductor should report the fact, so that the wood-work of that berth could be washed down by the car-cleaner with some disinfectant solution.

Railway authorities should also be induced to provide means, and enforce regulations, for suppressing the filthy practice of spitting and expectorating on the floors of day cars. To say nothing of the sanitary part of the question, it is most disgusting for people to find themselves sitting with boots and skirts in contact with the expectorations of a previous occupant. These deposits are also liable to become part of the atmospheric dust of such cars.

Yours, etc.,

WILLIAM OLDRIGHT.

Books and Pamphlets Received.

Field Hospital Service with the Army of the Potomac. By W. W. Potter, M.D.

A Dermoid Cyst of the Left Ovary. By W. W. Potter, M.D. and W. C. Krauss, M.D.

Transactions of the Medical Society of the State of North Carolina. 26th Annual Session, 1889.

Discussion on Craniotomy; reprinted from the transactions of the American Association of Obstetricians and Gynæcologists, September, 1889.

Book Notices.

Neuroses of the Genito-Urinary System in the Male, with Sterility and Impotence. By Dr. R. Ultzmann, of the University of Vienna, translated by G. W. Allen, M.D.

The author deals with this subject in a commendable manner, avoiding the disgusting details of sexual perversions and abnormalties. The physician will find in the work reliable advice as to those cases in which something more than moral treatment is usually required.

Wood's Medical and Surgical Monographs. Vol. 5, No. 3, March, 1890, Wm. Wood & Co., New York.

In this number are contained Treatment of Cancer by Electricity, by J. I. Parsons, London; The Dreadful Revival of Leprosy, by Sir Morrell Mackenzie, M.D.; Diseases of Old Age, by Dr. A. Seidel, Berlin; Urinary Neuroses of Childhood, by Dr. Guinon, Paris; Varicose Veins of the Lower Extremities, by W. H. Bennett, F.R.C.S.; Uses of Electrolysis in Surgery, by W. E. Steavenson, M.D., London.

The Pulse. By W. H. Broadbent, M.D., Senior Physician to and Lecturer on Clinical Medicine in the Medical School of St. Mary's Hospital. Lea Bros. & Co., Philadelphia.

In this book Dr. Broadbent reproduces, with some amplifications and additions, the Croonian Lectures delivered by him in 1887 before the College of Physicians, of London. The work is especially valuable as the expression of opinion of one of the best known and most highly esteemed of English clinical observers; opinions based on the observations of a lifetime.

Sanders' Question Compends: Essentials of Examination of Urine. By Lawrence Wolff, M.D. *Essentials of Diseases of the Skin.* By Henry W. Stelwagon, M.D. W. B. Saunders, Philadelphia.

The information contained is accurate, and tersely put. The volume on skin diseases is especially good. We must protest, however, against the arrangement in the form of question and answer. True, it is difficult for the student to seize all the salient points of any description of disease, but it should be part of his training to acquire this faculty, not only in disease as he meets it at the bedside, but also as to the description of it.

Personal.

DR. GEORGE A. PETERS left Toronto on April 4th for a trip to England.

DR. WILLIAM OSLER, of Baltimore, spent a couple of his Easter holidays in Toronto.

DR A. T. CARSON, of Toronto, who has been in poor health for some time, started for Bermuda April 4th.

Births, Marriages and Deaths.

BIRTHS.

MILLMAN.—On March 30th, at 544 Spadina Avenue, the wife of T. Millman, M.D., of a son.

PHILLIPS.—On March 23rd, 1890, at 67 Ross street, Winnipeg, the wife of T. Graham Phillips, M.D., of a daughter.

ELLIS.—At 272 Dundas street, Toronto, on the 13th inst., the wife of Austin D. Ellis, M.B. (Aberd.), of a daughter.

MARRIAGE.

REESE—ROBINSON.—In Buffalo, on March 5th, by Rev. J. E. Williams, D.D., pastor of Plymouth M.E. Church, Mrs. Gertrude Reese, formerly of Buffalo, to R. H. Robinson, M.D., of Toronto.

DEATH.

NELLES.—At London, Ont., on March 21st, Amelia, beloved wife of Dr. J. A. Nelles.

Obituary.

JOHN HICKMAN, M.D.—We regret that an obituary notice, which should have appeared in THE PRACTITIONER some months ago, was mislaid. Dr. John Hickman was born in Port Hope, Ont., in 1845. After completing his academic education at Oberlin College, he commenced his medical course in the Toronto School of Medicine, and graduated in the University of Toronto in 1869. He spent three years with his father, Dr. Edward Hickman, at Bolton, and then went to Bergon Point, New Jersey, where he practised up to the time of his death, which took place June 7, 1889.

Miscellaneous.

THE INTERNATIONAL MEDICAL CONGRESS.—The tenth International Medical Congress, to which we have frequently referred, will be held in Berlin, August 4th to 9th. The profession of that city have sent assurances that the medical fraternity of this continent who attend the Congress will receive a hearty welcome.

A NEW MEDICAL FACULTY.—At a meeting of the Huron Medical Association, held three years ago this month, the following resolution was moved by Dr. Taylor, of Goderich, and seconded by Dr. Williams, of Clinton, and unanimously adopted:—

"That whereas a scheme has been proposed, having for its object the formation of a faculty of medicine under the direct control of Toronto University and in intimate relation to the General Hospital, the members of the Huron Medical Association desire to place on record their appreciation of the plan proposed, and their confidence that, if the same is carried out, the cause of medical education in Ontario will thereby be greatly perfected, and many of the well-founded objections to the present system removed; and that we assure the promoters of this scheme that they will have our hearty co-operation and sympathy in this effort to establish in close connection with our Provincial University a medical school, which shall afford the best known facilities for the study and investigation of medical science."

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

TORONTO, MAY 1, 1886.

Original Communications.

IMPERFECT TRANSITION OF THE TESTIS, WITH NOTES OF AN UNUSUAL CASE.*

BY A. PRIMROSE, M.B., C.M. EDIN., M.R.C.S. ENG.

Surgical Registrar to the Hospital for Sick Children, Toronto.

Mr. President and Gentlemen,—The testicles lie in the lumbar region of the abdominal cavity until the sixth month of fœtal life is completed; they are there in close relation to the kidney, and are suspended in position by a fold of peritoneum—the mesorchium. During the last three months of fœtal development, the relations of the testicles become altered, and these organs are gradually transferred from the abdominal cavity into the scrotum—one testicle is usually in the scrotum during the eighth month, and they are both found in that position during the ninth month, *i.e.*, at full term. The cause and mechanism of the descent of the testicle has afforded a subject for much discussion.

The testicle may be retained or its descent delayed. It has been stated† that the gland is delayed in its descent until the first year after birth in 1 in 5 infants. Sir Astley Cooper has often seen the gland descend between the ages of 13 and 17, sometimes 21. If it does not descend before puberty, it rarely descends after. Humphrey has recorded a case in which testicle descended at the age of 40, and Fenwick reported a case before the Medical Society of London in which the gland descended into the scrotum, at the age of 40.‡

The testicle, as it lies in its normal position, has certain coverings which surround it in the scrotum. The infundibuliform fascia can be traced upwards, and is found to be continuous with the transversalis fascia of the abdomen, while the spermatic fascia is a prolongation from the intercolumnar fascia on the surface of the external oblique. Between these, the cremasteric fascia envelopes the cord and its coverings; the muscular loops of the cremasteric fascia are continuous with the fibres of the internal oblique muscle. The most important covering for us to consider in the present connection is the tunica vaginalis. The peritoneal pouch, known as the processus vaginalis, descends into the scrotum in advance of the testicle. It is impossible that the peritoneal protrusion is formed by the advancing testicle, because it can be plainly demonstrated that the processus vaginalis exists whilst the testicle is still in the abdomen. It is the advancing peritoneal pouch which carries before it the coverings derived from the abdominal parieties, which ultimately surround the testicle in the scrotum.

At the fifth week of intra-uterine life, the rudimentary testicle and the Wolffian body lie at the lower and outer part of the kidney; as development proceeds the kidney ascends, and the testicle attains a position between the lower

* Read before the Toronto Medical Society.

† Holmes' System of Surgery, Am. ed., vol. ii., p. 502.

‡ *Lancet*, Dec. 12, 1885, p. 1, 87.

end of the kidney and the internal abdominal ring. During the third month, the important structure, which John Hunter called the gubernaculum testis, makes its appearance; this is a band which stretches from the internal abdominal ring to end above, by being attached to the epididymis and body of the testicle, and to the peritoneum of the posterior wall of the abdomen; this band seems sufficient to hold the testicle near the abdominal ring, and to prevent its ascending with the kidney. During the sixth month the testicle and epididymis begin to acquire a double fold of peritoneum, constituting a mesorchium, and thus the gland becomes free in the abdomen; the lower fold of the mesorchium terminates in the tube of peritoneum, known as the processus vaginalis, which descends into the scrotum; the fibres of the gubernaculum blend with the extremity of the processus vaginalis, and are probably accountable for the formation of this peritoneal pouch.

We must look upon the gubernaculum testis as the probable cause of the descent of the testicle into the scrotum. This structure is composed of a central band of unstriped muscular fibres, and a number of striped fibres prolonged upwards from the abdominal wall. We have seen that it is attached above to the testicle and the epididymis, and we wish now to study its inferior attachments. Some of its fibres have been demonstrated piercing the abdominal wall and extending into Scarpa's triangle; others are found attached to the pubes and the root of the penis. At a later period of development, fibres of the gubernaculum are found running on to the bottom of the scrotum, while in the eighth month several of the fibres pass into the perineum, and end over the tuberosities of the ischium, or may blend with the sphincter ani.

The shortening of the gubernaculum, or that portion of it which is attached above to the testicle and below to the bottom of the scrotum, is probably the cause of the descent of the testicle into the scrotum; the striped muscular fibres, which I alluded to as constituting part of the gubernaculum, when they are transferred by the descent of the gland into the scrotum, constitute part of the cremasteric fibres, as found in the coverings of the cord.*

In the female, the gubernaculum is attached above, close to that part of the genital cord which becomes the uterus; below it passes down the inguinal canal, and persists, in the adult, as the round ligament of the uterus. We also have in the female a process of peritoneum which corresponds to the processus vaginalis in the male; this process of peritoneum in the female passes down the inguinal canal, and is known as the canal of Nuck. These facts might suggest to us the possibility of the gubernaculum having an attachment to the ovary, similar to that of the testicle, and in such a case the ovary might be guided into the inguinal canal, just as the testicle is caused to descend into the scrotum. In April, 1888, I saw Mr. Bland Sutton operate on a woman aged 35, in the Middlesex Hospital, London. She had a tumor in the right inguinal region and right labium. She had been wearing a truss, but it caused her pain and induced vomiting at times. The tumor enlarged at the menstrual periods, but menstruation went on without any inconvenience. An incision was made over the tumor, and on opening the sac the ovary and Fallopian tube were found in the canal of Nuck. The ovary and tube were removed through the inguinal incision, and the neck of the sac ligatured.

The relations of the ovary in this case are not similar to the relations of the testicle in the scrotum, because in the case of the testicle the gland passes down behind the processus vaginalis, whereas the ovary was actually within the pouch of the peritoneum forming the canal of Nuck; nevertheless it is conceivable that the ovary, through the agency of an unusually attached gubernaculum, should be guided towards the inguinal canal and there fixed; having been placed in that position, it might readily be forced down into the canal of Nuck by any increase of the intra-abdominal pressure.

We have now to consider the factors which have to do in the production of the condition of retained testis.

1. The action of the gubernaculum testis may be deficient. Lockwood* describes a case in

* For further details concerning these structures, I must refer you to the interesting lectures by Mr. C. B. Lockwood, published in the *Journal of Anatomy and Physiology*, vol. xxii., No. 38, pp. 461-502.

* *British Medical Journal*, 1886, vol. i., p. 444.

which he found that the gubernaculum, instead of being attached to the epididymis or vas deferens, ended in a brush of fibres lying free in the peritoneal cavity, the testicle in this case remaining in the abdomen. Again, the fibres of the gubernaculum attached to the scrotum may not exercise sufficient traction to cause the descent of the testicle.

2. Some obstacle in the inguinal canal, *e.g.*, a plug of fat, may prevent the passage of the testicle, or the mere narrowness of the canal has been alleged as a cause.

3. Adhesions to the viscera or the abdominal wall, consequent on peritonitis, as in a case recorded by Mr. Wood.

4. Shortness of the vas deferens or of the spermatic vessels.

5. Fusion of the two testes—synorchism.

The testicle in some cases, although not retained in the abdomen, may take up some abnormal position outside of that cavity. The most extraordinary, perhaps, is that in which the testicle occupies a position in the perineum. Williams* has published an analysis of twenty-five cases of this abnormality, of these seventeen were of the right testicle and eight of the left. Bryant† published a case in which he alludes to the fact, as possibly more than a mere coincidence, that the father of the child had had one of his testicles removed before marriage. The gland may remain in the inguinal canal, or it may be found lying over Poupart's ligament at the base of Scarpa's triangle. It may pass through the crural ring into the crural canal, and thence mount through the saphenous opening.

Compare with these facts the statements which have been made with regard to the lower attachments of the gubernaculum testis. These were:

1. Abdominal wall and extending into Scarpa's triangle.

2. To pubes and root of penis.

3. Several fibres pass to perineum, and tuberosity of ischium.

4. To the bottom of the scrotum.

The last attachment has, of course, to do with the normal descent of the organ into the scrotum.‡

Occasionally the scrotum is not well developed, and this may have something to do with the abnormal position of the testicle. This, however, is by no means a constant condition in these cases; thus Williams found in the twenty-five cases of testis in perineo in only six was there any mal-development of the scrotum observed, in all the others the scrotum was symmetrically developed. In the six cases it was observed that most of them were due to atrophy of the scrotum, from disease, and the condition was not a congenital one. Baudry* records a case of this kind in which the right half of the scrotum appeared to be absent; the raphé was seen on the right side, and from it the skin continued without fold or line of demarcation to the thigh; no sign of the dartos could be found to the right of the raphé, for while cold caused distinct contraction on the left side, none was observable on the right. This case of Baudry's is, however, unusual, and in most cases the scrotum is sufficiently well developed to permit of replacement of the testicle in its proper position. Mr. Annandale† performed the first successful operation of this kind. In his case, the left testicle was in the perineum. An interesting point in Mr. Annandale's case was, that during the operation a fibrous band attached to the bottom of the testis above, and to the tuberosity of the ischium below, appeared to correspond to one part of the gubernaculum, and had to be divided before the testicle could be freed. The gland was placed in its proper position and sutured to the bottom of the scrotum: the result was a successful one.

A very rare condition is that in which both testes have been retained within the abdomen; such a case is recorded by John Hunter and another by Curling.* Of the commoner varieties of retained testis we have conditions in which

* *British Medical Journal*, July 21, 1883, p. 110.

† Guy's Hospital Reports, vol. xiii., p. 419.

‡ Some writers attribute the mechanism of the descent of the testes to other causes than the contraction of the gubernaculum testis. Dr. Bramman thinks that the descent is assisted by the rapid development of the viscera behind the gland, the final descent into the scrotum being probably due to the contraction of a layer of cellular tissue lying on the inner aspect of the gubernaculum connected below with the tissues of the scrotum. *Brit. Med. Jour.*, 1884, vol. 2, p. 1288.

Mr. Bland Sutton regards the descent of the testicles as of the nature of a perpetuated hernia. He suggests that the first instance of the descent of a testicle was probably a true hernia of that body, and he places the phenomenon in the category of inherited pathological conditions.—*An Introduction to Abnormal Anatomy*, p. 372.

* *Lancet*, Sept. 16, 1882, p. 454.

† *British Medical Journal*, Jan. 4, 1879, p. 7.

‡ Curling on the Testis, p. 106, Am. ed.

one testicle (usually the left) is retained within the abdomen, or it may be in the inguinal canal, sometimes it is just beyond the external ring An important question is concerning the possibility of retained testes performing their natural functions. John Hunter considered that, when both testes were retained in the abdominal cavity, the individual was sterile. Curling,* however, differed from this view, and was quite convinced that, if the testicles were in the abdominal cavity, they were quite capable of performing their natural functions. On the other hand, if a testicle were retained in the groin, it in all probability would undergo atrophy, and would be functionally useless. If the testicle is in the abdomen, it is protected from injury, and its nutrition is probably well maintained; if, however, it be transferred to the inguinal canal, it is there exposed so that inflammation may be excited in it, or its nutrition interfered with. These remarks would apply equally to a testicle situated in the perineum. We are not justified, however, in assuming that all such glands are functionally useless. Bryant† records a case in which a testis in the inguinal canal was complicated with an encysted hydrocele; he tapped it and drew off fluid containing spermatozoa. Ledwich‡ dissected a testicle which had been implanted in the perineum and found spermatozoa in the ducts. We may conclude that when a gland is in an abnormal position outside the abdomen, it is liable to become atrophied and useless. It may undergo fibrous or fatty degeneration. This result is not so likely to occur when the testicle is retained entirely within the abdominal cavity.

One considerable danger existing in cases of testis retained within the abdomen is, that any inflammation of the organ very readily spreads to the peritoneum, and sets up acute peritonitis.

A retained testicle may be the seat of malignant disease, or it may be complicated by the development of a hydrocele, constituting what Curling called inguinal hydrocele. It is very common to have a hernia complicating the condition. Of 25 cases recorded, by Williams, of testis in perineo, 3 were complicated with hernia. It appears to occur with still greater frequency when the testicle is retained in the groin. It is worthy of note that an inflamed undescended testicle may give rise to symptoms simulating intestinal obstruction.*

In this paper I cannot discuss the treatment or diagnosis of these conditions. Mr. Watson Cheyne has recently devised a very simple apparatus for securing the testicle in the scrotum, after the operation for replacing it in its proper position. A reprint of Mr. Cheyne's paper appears in THE CANADIAN PRACTITIONER for March 17, p. 133.

I will now briefly narrate notes of a case under the care of Dr. Cameron, in the Toronto General Hospital. Dr. Cameron has kindly permitted me to report the case. I assisted him in the operation on March 21st, 1890.

F. W. S., æt. 25, single. Patient has never enjoyed particularly good health; has had measles, mumps and whooping cough; no other serious illness. The family history is good; parents both living; one brother died in 1886; the cause of death was thought to have been consumption.

At 10 years of age he first noticed a lump in the groin, about the size of a hen's egg; he does not know whether it had been there previously; his attention was first called to it by some boys who were "in swimming" with him. He suspected it to be a testicle, and endeavored several times to force it into the scrotum, but without success. About six years ago he accidently discovered a swelling in his scrotum; he does not know how long it had existed, but at that time it was about as large as his clenched fist. He consulted a physician, who thought it was a hydrocele, as it was translucent. When he lay on his back it almost entirely disappeared. On seeking further advice he was advised to wear a truss, but this caused him great pain and annoyance, by pressure on the testicle, and did not prevent the return of the swelling. He then wore a suspensory bandage for a time. He consulted a doctor in Toronto, who advised rest and change of scene. He spent a summer in Muskoka, and subsequently went to England. On his return it was thought that the tumor had somewhat diminished in size, and that his general health had improved, but he was not satisfied with his progress, and was very uneasy about his condition. He consulted Dr. Cameron in March of the present year.

* Curling on the Testis, Am. ed., p. 98.
† Bryant's Practice of Surgery, vol. ii., p. 238.
‡ *British Medical Journal*, 1883, vol. ii., p. 116.
* Holmes' System of Surgery, vol. ii., p. 894 Am. ed.

On admission to the hospital there was a distinct rounded tumor over the inner end of Poupart's ligament of the left side, measuring three inches in diameter. It lay over the anterior face of the external abdominal ring, and extended upwards on the abdomen, outwards towards the iliac spine, and to a slight extent downwards over Poupart's ligament. There was no redness about the swelling, and its edges were ill-defined. The tumor was examined under chloroform.

On percussion, a note of absolute dulness was elicited; the tumor was soft and fluctuating; there was no tension; it could be crowded up so as to diminish its size to a considerable extent, and when freed again it would resume its former size and flaccid condition. It could be made to project downwards into the upper part of the scrotum. The tumor was irreducible, and there was no testicle in the scrotum on the left side. The left side of the scrotum was well-developed, and its rugosity proved the presence of the dartos fibres.

On invaginating the scrotum and pressing upwards in the direction of the inguinal canal, the external abdominal ring was felt. It was of unusually large size, its triangular shape was very evident, and its edges sharp and well-defined. At first it seemed as if there were no structure occupying the ring, but on careful examination a small firm cord-like structure was found between the finger and the pubis; this was supposed to be the vas deferens; nothing else was felt in the ring. The finger could be passed through the ring to an unlimited extent as far as the length of the finger would permit; there was no evidence of any internal ring. In front of the external oblique the tumor was felt, and was bimanually examined. The lax tissue in which the tumour lay was explored; the finger could be passed upwards two inches above Poupart's ligament under the superficial fascia, and downwards over the inner end of Poupart's ligament, where a firm crescentic edge of fascia was encountered; its concavity was inwards and occupying the position of the falciform edge of the saphenous opening in the fascia lata.

An operation was performed under chloroform on March 21st. The pubes had been previously shaved, and the parts thoroughly cleansed by means of an antiseptic lotion. 1-2000 perchloride of mercury. An incision two and a half inches long was made over the tumour. The skin and subcutaneous tissues were divided, and then a firm layer of fascia presented in the wound; this was divided on a director. Still another membranous structure presented; this was carefully divided and proved to be peritoneum, within which was a mass of fat about the size of a duck's egg. A portion of this was lying in the external ring, but freely movable there; when this was drawn out, a narrow pedicle was discovered passing into the abdomen, and adherent to the apex of the ring. The testicle was sought for, but could not be found in contact with the omental protrusion; a search was made for it, and it was found lying at the base of the external ring, quite apart from the omental hernia, and not in the same sack of peritoneum; it readily protruded two inches from the external opening, Its size was a little larger than a hazel nut, and it was attached by a broad long pedicle, which passed up over the pubes into the abdominal cavity. This pedicle might be described as consisting of two portions: 1. An anterior portion, which came down and enveloped the testicle above and anteriorly, and from its relations and appearance seemed to be the processus vaginalis. 2. A posterior portion, consisting of the cord and its coverings, in which were a number of dilated and tortuous vessels; the vas could be felt in it. The epididymis surmounted the testicle. The condition of affairs might be summed up thus:

1. An omental hernia in its sac protruding through the upper portion of the external ring.

2. The testicle with the cord and the vaginal process of peritoneum protruding through the lower portion of the ring.

These structures together formed the tumor occupying the position in the groin already indicated.

Along the neck of the omental hernia, within the sac, the finger could be passed on into the general peritoneal cavity. On examining the fatty mass, a small portion about the size of an almond was found; it had the appearance of the rest of the omental protrusion, but was very much firmer and more tense.

An attempt was made to reduce the omental hernia, but this was only partially successful, and was abandoned. The testicle was removed,

a strong silk ligature was applied just above the organ where the pedicle was transfixed, and a Tait's knot applied. The testicle was then removed by means of scissors. The peritoneum was then carefully stitched by interrupted catgut suture over the omental hernia. A catgut drain was introduced down to the peritoneum, the edges of the skin incision were brought together, and an antiseptic dressing applied.

The wound healed readily. It is too early to pronounce on the success of the operation, as regards the comfort of the patient, but the case is of special interest because of the anatomical relations of the parts.

It is stated in Holmes'* System of Surgery that the hernia in these cases is in the same peritoneal pouch as the testicle. The statement, strictly speaking, is inaccurate, and is an anatomical impossibility. It is quite possible for the hernia to protrude into the patent vaginal process, but it is even then separated from the testicle by the layer of peritoneum forming the visceral layer of the tunica vaginalis; this is the condition existing in congenital hernia, and is the common state of affairs in herniæ complicating retained testis.

In the case just narrated, the omental hernia was quite distinct from the testicle, and was not within the tunica vaginalis, but had a sac of peritoneum entirely separate from the gland.

Mr. Jonathan Hutchinson † has recorded a case in which a large fatty tumor surrounded the testicle in the scrotum, but was not adherent to the gland. These tumors are supposed to originate in the subperitoneal fatty tissue, and subsequently travel down from the external ring into the scrotum. Might not a fatty tumor surrounding the testicle be developed from a piece of omentum forming a hernia? The pedicle of the omental protrusion in Dr. Cameron's case was so very slim that one might suppose it possible to have the omental mass completely separated. The coverings of such a tumor would decide whether it could or could not originate from the extra peritoneal fat. In Mr. Hutchinson's case there was unfortunately some doubt as to the coverings of the tumor.

* Holmes' System of Surgery, vol. ii., p. 506.

† Transactions of Pathological Society, vol. xv., p. 193.

Selections.

CAMPHORIC ACID FOR NIGHT SWEATS OF PHTHISIS.—Camphoric acid is not pleasant of taste, and is best given in capsules. Leu gave fifty-five doses to thirteen patients who had severe night sweats. When the skin remained absolutely dry the effect was regarded as complete; in sixty per cent. the effect was complete; in twenty-two partial, and in eighteen absent. In most cases the medium dose was 30 grains at night, often increased to 45 or even 75 grains, by giving 30 grains in the afternoon and 30 to 45 in the evening. The effect of the acid sometimes extended even to the succeeding night. To compare the acid with atropine, they were given alternately to six patients. Very large doses of atropine were used, but a complete effect was obtained in only forty per cent. Atropine is thus less efficacious and far less lasting in action than camphoric acid. Moreover, atropine may cause difficulty in swallowing, dryness of the pharynx, great thirst, disturbed sleep, vertigo. The acid does not in any way interfere with appetite or digestion. By some of the patients the return of sleep was ascribed to the camphoric acid; no doubt sleep is favored indirectly by the checking of the sweats.—*Bull. Gén. de Thérapeutique, March 30, 1890.*

DIPHTHERIA CONVEYED BY CATS.—Two writers in the *Medical Age* (1889, No. 7) have reported cases of diphtheria propagated from or carried by these domestic animals.

Dr. Lawrence reports two cases. Upon careful inquiry it was found that the first case had not been exposed to the disease, although there were some cases within a mile of her father's house. He incidentally learned that there was a sick cat in the house, which had been fondled by the little girl some days before. The cat died shortly after its playmate became sick, and a second cat also became sick and was killed. An investigation revealed the fact that one neighbor farmer lost seventeen cats, and another fifteen, with some throat trouble. One of the farmers stated that he had examined the throats of some of the cats, and found them covered with a white membrane. Cats are disposed to run from house to house, and one diseased cat may be the means of carrying diphtheria to

many children whom the parents are taking every means to protect from danger.

Dr. Scott reports four most malignant cases occurring in one family. A kitten came to the house a few days before the disease manifested itself, and was fondled by the children. Through accident the mother discovered that the mouth and throat of the feline were infested with false membranes, and therefore caused it to be killed; but too late to save herself and three little girls from infection.

CHLORALAMIDE AS A HYPNOTIC.—Mr. Geo. P. Cope, in the *Dublin Journal of Medical Science*, for February, 1890, describes his experience with chloralamide, and says: Chloralamide is undoubtedly a sleep-producing agent. The sleep created varies from five to eight hours, and appears to be sound and refreshing. A dose of 25 to 35 grains was sufficient to cause sleep in patients suffering from melancholia and chronic mania, but in acute mania small doses had no effect, and sleep was not produced by less than from 40 to 50 grains. No recognized evil effects followed the continued use of this drug for eight days, and only one out of twenty-five persons under treatment with chloralamide was noticed to be suffering from gastric disturbances, viz., giddiness and sickness, with dry, brown tongue, which followed six hours after a draught, when no sleep ensued. Chloralamide, as it consists of a combination of chloral, somewhat resembles it in its action. Both induce sleep, lasting from five to eight hours, but possess little analgesic influence unless when they cause sleep. Unlike opium, they will not relieve pain. The time that elapses before sleep is produced varies from thirty minutes to an hour, and the sleep appears to be natural and refreshing. Its action on the circulation is quite the opposite of that of chloral hydrate, which acts directly upon the blood pressure, slowing the pulse and respiration, and producing poisonous effects, by direct action on the cardiac ganglia and respiratory centre, causing paralysis of the heart and cessation of respiration. Chloralamide appears, as far as I have been able to ascertain, to be free from such danger. In five cases—one of pneumonia, one of phthisis, one of cardiac disease, and two of insomnia—I obained sphygmographic tracings before and after its administration, and the blood pressure was not lowered in any of them, while the respiration and temperature remained the same.—*American Practitioner and News.*

THE BERLIN CONGRESS.—Dr. Robert Newman, of No. 68 West Thirty-sixth Street, New York, announces that he has made arrangements for certain stated European tours, at reduced rates of travel, for American physicians who purpose attending the Tenth International Medical Congress. His circular, which we presume he is prepared to send to any applicant, gives very full information as to routes, expenses, etc.

DIET AND HYGIENE IN THE TREATMENT OF CONSUMPTION.—The most important indication in the treatment of phthisis is to improve nutrition. *This must be accomplished or the patient will not survive.* Even if, by improved methods of treatment, we have the power to arrest the suppuration and all the long train of symptoms incident to this terrible affection, we must not stop there, but go on in our good work by restoring the lost tissues, enriching and increasing the blood supply, and improving the vitality and tone of the whole system, by establishing a scientific dietary of our patients.

Beef juices, or raw meat extracts, are very valuable adjuncts in all, and absolutely necessary in most, cases of phthisis, on account of their immense nutrient force in a concentrated form, the small quantity required, its tolerance by the stomach, and rapid and complete assimilation, whereby the strength and vital powers are quickly nourished and maintained. Periods will occur in every case of phthisis when gastric irritation will preclude the use of ordinary food; then our reliance must be placed in these raw concentrated foods. I have used, in my practice, every known raw food extract, but for two years past I have exclusively prescribed a raw meat extract, prepared in this city, and known as *Bovinine*. This article of food is very rich in all the elements entering into the formation of blood and tissue, is easily borne by the most delicate stomach, of excellent taste and odor, and is rapidly and completely assimilated. I am personally familiar with the mode and preparation of this food, and know that the meats

used are from the best parts of the finest beef supplied by the great Chicago stock-yards. I do not wish to appear invidious, but I prefer *Bovinine* above all other raw food extracts for its great nutrient qualities, acceptability, and its large percentage of albuminoids (26.58 per cent.). I usually administer this food three or four times daily,in doses varying from ten drops to one teaspoonful, diluted with four to eight times the quantity of water, milk, or milk and cream mixed. In conditions of great exhaustion and debility requiring stimulants, the raw food may be added to milk-punch or egg-nog.

Bovinine contains lactic acid, a normal constitutuent of the muscular tissues. This acid, in the presence of pepsin or pancreatine, rapidly digests nitrogenous matter, which accounts for the speedy absorption and assimilation of *Bovinine* in cases of impaired digestive functions.—*Edwin F. Rush, M.D., in the Trained Nurse.*

NOTE ON THE USE OF TURPENTINE IN TYPHOID FEVER.—The most useful articles in a medical journal are not those which are the most original, and certainly if lack of originality be a spice of value, the present note in regard to the oil of turpentine in typhoid fever will be well flavored. The employment of the remedy, I believe, originated with Dr. George B. Wood, and was certainly very strongly inculcated by him, so that it has been amusing and instructive when from time to time, especially in some of the English journals, it has been brought forward as a new discovery by medical writers. Dr. George B. Wood taught that the oil of turpentine acts as a local remedy in typhoid fever, and that there are two stages of the disease in which it is especially useful. The first is at the end of the second week, when the tongue becomes especially dry and glazed, and the abdomen very distinctly tympanitic, with or without the co-existence of diarrhœa. The second period, in which the remedy was especially used by the former Professor of Therapeutics in the University, was during convalescence, when the perpetually recurring diarrhœa, with lack of digestive power, indicated failure of some of the intestinal ulcers to heal. For nearly twenty-five years I have been following the practice of my predecessor, and I am very thoroughly convinced by experience in hospital and in private practice, that many lives would be saved if the oil of turpentine was more freely used in this disease. I do not believe that it is possible to reach the ulcerations in the small intestine with nitrate of of silver, or other similar readily decomposable or readily absorbable remedy. The volatile oils are absorbed slowly and are rapidly vaporized at the temperature of the human abdomen, so that there can be no reasonable doubt that, either in the form of liquid, or more probably in the form of vapor, when given freely by the mouth, that they get into contact with the mucous membrane of the upper intestine. It has become my routine habit to give the turpentine in every case of typhoid fever, beginning about the twelfth or fifteenth day, and I believe if its use were habitual in the profession there would be much fewer cases of intestinal hæmorrhage or other severe symptoms due to a local lesion.

In my own case, convalescence from typhoid fever was exceedingly slow, on account of the perpetually recurring diarrhœa, and when at the instance of Dr. George B. Wood himself, then an old man nearly eighty years of age, the turpentine was exhibited, the local symptoms were relieved immediately. Four or five times I experimented by stopping the turpentine, and when local symptoms had returned, on giving the turpentine again, would see them abate within twenty-four hours. The effect of the drug was scarcely mistakable. The turpentine may be disguised by means of glycerin and a volatile oil made into an emulsion, which is rarely objected to by patients. Ten or fifteen drops should be given every two hours during the day, the patient being allowed to rest at night. The following formula will be found satisfactory :

℞.—Ol. caryophylla . . . gtt. vj.
Ol. terebinth. . . . f℥iiss.
Glycerin,)
Mucil. acaciæ,) . . . aa ℥fss.
Syrup,)
Aquæ,) . . aa q.s.ad f℥iij.—M.

Sig.—Dessertspoonful as directed.

H. C. Wood, M.D., LL.D., in Med. News.

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

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TORONTO, MAY 1, 1890.

ONTARIO MEDICAL ASSOCIATION.

As the Provincial Elections take place on the 5th June, it has been decided to postpone the meeting of the Ontario Medical Association to the week following. The Association will therefore meet in Toronto on Wednesday and Thursday, the 11th and 12th of June.

CANADIAN MEDICAL ASSOCIATION.

The next meeting of the Canadian Medical Association will be held in Toronto, Tuesday, Wednesday, and Thursday, September 9, 10, and 11. The committee of arrangements appointed at the last meeting at Banff, has been largely increased in numbers, and is now thoroughly organized under the chairmanship of Dr. Canniff. There were at first differences of opinion as to the best time for holding the meeting; but after careful consideration it was unanimously resolved to hold it early in the first week of the Toronto Industrial Exhibition. The numbers of strangers in the city during the first week of the Fair are generally not large, and it is not likely that the visiting members will suffer materially from hotel or railway crowding. At the same time those who desire to attend the Exhibition will be able to do so, without making an extra trip to Toronto. Arrangements are being made to entertain the visitors in a way that will be both creditable to the city and pleasant for the members of the Association. Toronto hopes to have a good meeting, and desires a large attendance of practitioners from all sections of the Dominion.

PROTESTED ELECTION.

We understand that Dr. Cranston, of Arnprior, has entered a protest against the return of Dr. Rogers of Ottawa, in the recent election in the Bathurst and Rideau Division for representation in the Medical Council. The grounds for the protest are: 1st, the names of a large proportion of voters were not written in full according to the directions given by the Council; 2nd, the returning officer Dr. Small, openly canvassed for Dr. Rogers.

No one can deny that a defeated candidate has a perfect right to enter a protest under certain circumstances, especially if there be any doubt about the choice of the electorate, and a probability that a re-election would change the result. As the vote stood, Rogers 74, Cranston 35, there can scarcely be any question about the intention of the voters in this instance. We think therefore that Dr. Cranston would do well to accept the decision as final, and withdraw his protest. At the same time we beg leave to express our regrets that the Council should have lost one of its best members.

THE MEDICAL FACULTY OF THE UNIVERSITY OF TORONTO.

The re-establishment of a Medical Teaching Faculty in the University of Toronto, three years ago, created considerable interest, and received the hearty support of the majority of the profession in Ontario. Its many friends and its few enemies carefully watched its career, and all will now probably agree that it is a pronounced success. This fact has stimulated a certain amount of opposition from a few who now enunciate the view that the Provincial University should not have a teaching faculty in Medicine. This brings up the important question of the proper functions of this institution. It has been contended in the past that the University should be simply an examining and degree-conferring body in all departments. Such contention, however, has long since fallen out of sight.

Many years ago, while the University was still young and comparatively weak, the opinion was expressed that public funds should not be expended in providing purely professional train-

ing. To what extent this opinion prevailed at that time we do not know, but it was used as a lever by enemies of the University to abolish in 1853 the Medical Teaching Faculty. This Faculty, if left alone, would undoubtedly have grown in strength and influence, and we cannot but think that its abolition was a disastrous mistake, and greatly retarded the growth of scientific Medical education in Ontario.

A glance at the present position of the Government and the Provincial University will show how much public opinion has changed with reference to the higher education of the masses. In recent years, schools and colleges have been established, with the assistance of public funds, in various departments for professional training. The departments thus formed, include engineering, architecture, agriculture, and law. Take for example the School of Practical Science, which has cost the public a large sum of money, and which includes the Department of Engineering. We can conceive of no reason why Engineering should receive such substantial assistance, while Medicine is supposed to be entitled to none. We contend that such subjects as Anatomy, Pathology, Bacteriology and Hygiene, which are of such vast importance to the public, should receive ample endowments, or should receive at least as much consideration as Engineering and Farming.

It was certainly hoped that the Medical Faculty would get some assistance in the higher scientific branches of Medicine. The Government, however, appeared to be thoroughly imbued with the old, narrow prejudices. They could show considerable and commendable zeal in helping certain professions, but they must make a solitary exception in the case of Medicine. They were willing to pay professors in other departments salaries of three thousand dollars or more, while they were quite satisfied to see the Pathologist get the magnificent sum of one hundred dollars per annum, if the fees from the students were sufficient for the purpose. They were quite contented to allow the teachers of the Toronto School of Medicine, who had spent the best energies of their lives in building up one of the largest and most prosperous Medical Colleges in Canada, give up their charter, relinquish their powers, and become practically the servants of the Senate of the University at much smaller salaries than they were receiving under the old regime. They simply gave the Senate the power to establish and conduct a Medical Faculty, with the understanding that the fees from the students would have to suffice in paying the salaries and running expenses.

The members of the Medical Faculty accepted the situation solely in the interests of higher medical education. They saw the vast benefits which would accrue to the students in attending the courses in the Science Department of the University. This Department has been well organized and equipped as required by the terms of the Federation Act. Nothing new has been provided for the students in Medicine. No extra expense has been involved, or in other words, this new Faculty has not cost the country a dollar. The students simply pay for the privilege of attending lectures, which would be delivered if there were no Medical Faculty in the country. The success of the undertaking must depend entirely upon the fees received from the students, and it happens that the amounts of such fees are greater than those charged by any other Medical College in Ontario. The success of the Faculty has surpassed the hopes of her friends, and has been greater than her enemies could quietly endure. Hence ariseth the wail from a few who had confidently expected that the scheme would prove quite "impracticable." One private corporation has seen fit to make an attack, which will either effect nothing or cause the abolition of the Faculty. Whether the interests of the profession, the students and the public are to be sacrificed for the sake of limited private interests remains to be seen.

PROGRAMME OF THE ONTARIO MEDICAL ASSOCIATION MEETING.

The programme for the meeting in June, so far as arranged, is as follows :

Discussion in Surgery—Subject, "Hernia": Dr. Sullivan, Kingston; Dr. McFarlane, Toronto; Dr. Waugh, London.

Discussion in Medicine—Subject, "A Plea for a more Liberal and Scientific Spirit of Investigation on the part of the Regular or Rational School of Medicine": Dr. Aylesworth, Col ling

wood; Dr. A. A. Macdonald, Toronto; Dr. W. A. Ross, Barrie.

Discussion in Obstetrics—Subject, "The Prevention of Post Partum Hemorrhage": Dr. Carson, Toronto; Dr. Powell, Ottawa; Dr. Baines, Toronto.

Discussion in Therapeutics—Subject, "Expectorants": Dr. J. L. Davison, Toronto; Dr. Taylor, Goderich; Dr. Gillies, Teeswater.

Discussion in Ophthalmology—Subject, "The Ophthalmoscope in relation to Diseases of the Nervous System": Drs. Ryerson, Palmer, and Wishart, Toronto.

The following papers have also been promised:

2. "Duodenal Ulcer," Dr. Duncan, Chatham.

2. (a) "The management of Club Foot," (b) "Hip Disease," Dr. B. E. Mackenzie, Toronto

3. "Empyema and the mechanical results of opening the Thorax": Dr. A. Smith, New York.

4. "Vomiting of Pregnancy and its Treatment": Dr. W. Irving, Kirkton.

5. "Hydrothorax": Dr. E. J. Barrick, Toronto.

6. "Some cases of Extra and Intra-Peritoneal Inflammation, with and without abcess formation. A plea for the operative treatment of Peritonitis": Dr. J. F. W. Ross, Toronto.

7. "Traumatic Tetanus and its Treatment": Dr. T. R. Dupuis, Kingston.

8. "Report of a case of Hysterectomy": Dr. A. B. Atherton, Toronto.

9. "A Case of Squint": Dr. Osborne, Hamilton.

10. "Paroxysmal Hæmaturia': Dr. H. J. Saunders, Kingston.

11. "Ruptured Perineum": Dr. Smith, Orangeville.

12. "Haemoptyis": Dr. McPhedran, Toronto.

13. "Diagnosis and local treatment of Tubercle or so-called Phthisis of the Larynx": Dr. Chas. Trow, Toronto.

14. "Treatment of Pneumonia": Dr. Addison, St. George.

15. "Peutyphlitic and Pelvic Abcess": Dr. Groves, Fergus.

16. "What I have learned to unlearn in the Dieases of Women": Dr. Wm. Goodell, Philadelphia.

17. "A case of Ichthyosis": Dr. Henderson, Kingston.

18. "Etiology of Puerperal Eclampsia": Dr. Fenwick, Kingston.

Dr. A. J. Johnson, Toronto, and Dr. Olmsted, Hamilton, will also read papers, but, as yet, have not sent in the subjects. The President and Secretary would urgently request any who intend to present papers to notify the Secretary of the fact not later than the first week in May.

Meeting of Medical Societies.

TORONTO MEDICAL SOCIETY.

The President, Dr. Atherton, in the chair.

PERICÆCAL ABSCESS SIMULATING HIP JOINT DISEASE.

Dr. B. E. McKenzie: On Dec. 20th, 1889, I was asked by Dr. Dawson to see, with him, a case of hip joint disease. I found the patient a strumous boy, five years of age, and of bad family history. His face was anxious, his temperature 103° F. I was told that on Thanksgiving Day he had fallen from a lumber pile. The next day he went to school and made no complaint, but in a day or two he became lame, and complained of tenderness in the right hip joint and in the front of the thigh and down it. He rested badly at night. Dr. Dawson was not called to see him until some two or three weeks had elapsed. When seen, there was great tenderness and infiltration in the anterior portion of Scarpa's space. The leg was flexed to an angle of 120°, both when the boy was lying down and when he was standing up. All motions—flexion, extension, rotation, abduction, and adduction—were limited. Measurements above the knee were the same on each side, but the upper part of the suspected thigh was the larger, contrary to what usually occurs. A Thomas splint, flexed and adjusted to the position of the limb. was applied.

A few days after Christmas it was found that the boy was worse, and wasting, and that there was no marked change in the region of the joint. I became suspicious of the diagnosis, and had the patient removed to the Hospital for Sick Children. He was anæsthetised, and there was found a tumor, fullness and resistance above and parallel to Poupart's ligament, reaching up to the anterior superior spinous process of the ilium, and extending not quite to the symphysis

pubis. Warm applications and opiates were used. When he came into the hospital, my attention was drawn, by the nurses, to the fact that he was constipated. I afterwards learned that before he went there, constipation had been a prominent symptom, although from questioning his parents I had not been able to elicit this information. There was no vomiting. He was taken home by his parents.

A few days after his return home, the tumor was found to be increased in size. I inserted an aspirator and drew off pus; thereupon a free incision was made, and about a pint of pus evacuated from below the reduplication of the peritoneum. No foreign body was found; a drainage tube was inserted; the boy recovered quickly, and in two weeks was out of doors.

I have thought this case worthy of note, as I was led into error. I have been unable to find much literature upon the subject. In 1881, Gibney recorded six cases of pericæcal abscess, mistaken for other disease. In one case the condition had been, by several eminent surgeons, diagnosed as a dislocation; but the abscess opened spontaneously. In another case the abscess had been complicated with a hernia, and had been diagnosed as a simple hernia. In four out of six the diagnosis had been hip joint disease.

HYSTERIA IN THE MALE.

Dr. T. Mackenzie related the case of an inmate of the Home of Incurables. Male, 29, Irish, had always lived a steady life, and had no bad habits, but was an inveterate smoker. Some two years ago he became melancholy. It was noticed in the dry goods store in which he was a clerk, that he preferred to do the heavy and dirty work rather than come forward and make sales. He was admitted into the home exactly two years before the date of his recovery. The history was that he came home on a Saturday night and had to be helped to bed. The next morning he came down stairs and gradually became worse, so that at length he could not walk, and had to have his limbs moved for him, but he could stand if supported. After a few days he became motionless. After he came into the home he was never seen to move a limb during the day time, but during the night he would draw up his legs, and turn in bed. Occasionally he would speak; in six months he would speak perhaps as many times, but then only to make a brief request. On one occasion, about six months after he was attacked, he actually broke out into conversation. Before he was brought into the hospital the actual cautery had been tried, but without avail. The irons heated to a white heat had been brought so close to him that he had been badly blistered. Electricity had also failed. Starvation, kept up for ten days, had been equally futile. He was very fond of tobacco and would smoke if the pipe was placed within his teeth. Pipe and tobacco had been placed within his reach, but he had never been known to touch them. Needles had been run into the flesh without producing any movement or complaint. During his stay in the home he became very stout, his appetite and digestion were good, and there was no trouble with either rectum or bladder. On Easter Sunday he asked for crutches, saying that he thought he could walk. Ever since that time he has walked and talked. He had the appearance of one afflicted with dementia—dull, expressionless face, listless eyes, chin resting on the breast. The cutaneous circulation was very poor, the hands and feet cold and blue. His memory is perfect and he is rational in every respect. He was said to have been disappointed in love.

Some twenty years ago, when a medical student, Dr. Price Brown had seen a somewhat similar case. The man had been found in the street in an unconscious condition. He fell into a state of apathy and could not move a limb, even the eyes and eyelids were motionless. After a little while he gained some slight power of motion in the feet. I remember once seeing his dinner placed on the floor before the open fire-place of the ward. He hopped over on one foot to the fire-place, bent down and seized his dinner in his teeth, without making a motion of his hands. Gradually he gained the use of his hands, and was then given a pair of crutches. One day he came down on his crutches to the front door of the hospital, looked around, and the coast being clear, he was seen to throw down his crutches, bolt for the high fence, clear it with a bound, "though lost to sight to memory dear."

PUERPERAL PYREXIA.

Dr. Spencer related the case of a primipara who had been attended for him during labor by a fellow practitioner, a demonstrator in one of

the medical schools. On the 5th day he found her with pinched face, abdominal tenderness, and a temperature of 101° F. On the eighth day pulse 120, temperature 105°. He gave quin. sulph. gr. v., q. 4, h., and washed out the uterus. The next day pulse 90, temperature normal. The question was, is this a case of auto infection, or is it due to the dissecting room. There was a pretty extensive laceration of the cervix.

Dr. Gordon asked whether the discharges were bad before or after the rise of temperature? As the medical schools had now been closed for a month, he did not see how the case could be blamed on the dissecting rooms.

Dr. Primrose inquired if any blood clots had come away when the uterus had been washed out? A blood clot becoming septic would be a good and sufficient cause for the condition.

Dr. Spencer replied that two or three small clots had come away.

Dr. Greig related a case in which a similar pyrexia had occurred on the eighth day of the puerpery. The woman had gone on very well, and he had ceased attendance. On the evening of the eighth day he was sent for. He found the woman complaining of pain, high fever, pulse 125, temperature 104°, and the lochial discharge almost stopped. He could not find any reason for the condition—there had not been any vaginal examination or injections. Quin. sulph. gr. xx., and an intra-uterine injection were resorted to. Next morning the woman was quite well. He was then told that the evening before, the breasts being very full, the husband had taken the nipple, and tried to relieve the breast. This action had caused a rather pleasurable sensation in the woman, she had laughed heartily, and in two or three hours afterwards had been seized with the pain and fever.

HEMORRHAGE FROM RUPTURED HYMEN.

Dr. Doolittle related the case of a young couple who had been married clandestinely. They came back to the house of the bride's mother and were together for about a half hour, when the bridegroom left. In the morning he was sent for and found the girl blanched, and with all the signs of the loss of a great deal of blood. On examination he found the vagina filled with clots; on clearing these away the hymen was found to be torn only to the depth of an eighth of an inch, but at the bottom of this tear there spurted forth a small artery from which the hemorrhage had occurred.

ANEURISM OF ARCH OF AORTA.

Dr. T. E. McKenzie presented a specimen of aneurism of the arch of the aorta, which had caused occlusion of the left carotid.

CALCULUS IN KIDNEY.

Dr. Wallwin: Mr. G.H., age, 32; occupation, ice dealer; was taken sick on Friday, March 21st, with chills, followed by sweats, which he thought was only a cold. On Saturday he was affected with another chill, and his teeth chattered and limbs shook, which was followed by profuse perspiration. This continued until Friday, when I first saw him. His condition then was, pulse, 115; temperature 103½°. His bowels had not moved for eight days previous. Urine scanty, alkaline reaction, and contained both albumen and pus, sp. g., 1008. He then complained of pain in left iliac region. There was dullness on percussion in left iliac region all along descending, transverse, and ascending colon, but not in hypogastric or lower part of umbilical regions. Liver dullness was much increased. Tongue coated, and great thirst. I then put him on strophanthus, quinine, and 20 grains pulv jalap. Next day temperature normal. No rigor during night, and remained so with exception of once until death. Bowels not yet moved, so I gave injection of glycerine ℥iii., and bowels moved once that afternoon and twice during night. On March 30th he was making water, when a stone became lodged in urethra, which was removed on following day, and washed out bladder, bringing away a larger quantity of stringy mucus, which I think was caused by the action of the alkali on the pus. After washing out the bladder clean, the next time he passed urine there was just as much pus as though his bladder had not been washed out, which indicated that the pus was not being formed in the bladder. Upon examination there could be no tumor discovered in the region of the kidney. There was no history of renal colic, no swelling of feet or eye-lids, no ascites, but patient had been passing small stones by urethra ever since 1876, at which time one was cut from the urethra, leaving a fistulous opening in front of scrotum about one inch long. Pus first was seen in urine about two years ago. His health dur-

ing the last fourteen months has been such that he never had to quit work, and was actively engaged in business until March 20th last. After relieving the bowels he was given pil. hydrarg and ex. col. co. iii., which reduced the size of liver. The tongue for the last eight days was bright red, owing to loss of epithelium.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, 1st April, 1890.

The President, Dr. J. W. Rosebrugh, in the chair.

Dr. Cockburn reported a case of

MALIGNANT DISEASE OF BLADDER.

About the latter end of November, 1888, my father came to me complaining of a feeling of discomfort just over the pubes, not severe, which eased at times, but never quite disappeared. During the next four or five weeks it gradually and almost imperceptibly became more palpable, till one day, about Christmas, 1888, a clot of blood was washed out with the urine, which, from its shape, must have been lodged in the urethra. I now began to feel some anxiety, for the sequence of symptoms tallied unpleasantly close with the earliest symptoms of malignant disease of the bladder. On January 7th, 1889, Dr. Leslie saw my father, and took a favorable view as to any vesical trouble, but (if I remember aright) thought he suffered from lithiasis, an opinion afterwards confirmed by Dr. Osler. After this my father went about as usual; he did not complain much, but when questioned always said the pain was getting slowly worse, and small casts of blood were passed from time to time. Still feeling very dissatisfied with my father's condition, I mentioned my suspicions to Dr. Bertram, of Dundas, the family physician, and suggested he should examine per rectum, which was done. Dr. Bertram discovered nothing abnormal and at this time took a hopeful view. On March 26th my father had a sort of hysterical attack, and took to his bed. Under Dr. Bertram's care he improved for a time, but he now began to pass small particles of tissue. These were carefully examined microscopically on several occasions by Dr. Mallock, Osborne, and myself. Their appearance was suspicious but by no means pathognomonic. Some of these shreds of tissue were sent to Dr. Osler, of Philadelphia, who very kindly examined them and (to the best of my recollection) said such particles were often passed by patients suffering from chronic degenerative changes in the kidneys.

The pain gradually increased, but no great change occurred till May 26th, when a considerable discharge of blood occurred at the end of micturition. On May 30th, Drs. Malloch and Bertram met me in consultation over my father's case. A perineal section was suggested pending an examination of the urine. The urine showed a considerable quantity of albumen and the operation was abandoned. From this date my father commenced taking morphia hypodermically. His general condition became worse, the pain over the pubes became more severe, and the whole hypogastric region became intensely tender on pressure. The abuminuria continued to increase, but although the urine was examined for casts by Dr. Malloch and myself on several occasions, none were found.

On August 9th, 1889, Dr. Osler, of Philadelphia, saw my father, in consultation with Dr. Malloch, Dr. Bertram, and myself. (Speaking from recollection) Dr. Osler was unable to detect anything definite by firm pressure over the pubes, and digital examination per rectum gave a negative result. Dr. Malloch examined my father per rectum on his first visit, and both he and Dr. Osler agreed in pronouncing the prostate normal and no pathological condition to be detected. On this occasion my father was sounded by Dr. Malloch with a negative result. To the best of my recollection, Dr. Osler believed it to be a case of gouty kidneys, remarking that the cause of the hæmaturia was obscure. Dr. Osler opposed any operation, and disagreed with me as to the presence of malignant disease in the bladder. This opinion, expressed by so eminent an authority, gave myself and my family great relief, and I began to hope I might be wrong in my view of the case. From this time my father went steadily down hill, the pain became more severe and constant in the regions indicated, blood and pus were constantly being passed. The morphia was gradually increased. As time went on he began to emaciate; blood was constantly passed at the end of micturition, and the suffering on these occasions became intense,

especially towards the close of the act. The pain spread down the penis as in cases of calculus.

Uræmic symptoms appeared from time to time,and the urine became loaded with albumen, but in spite of repeated examinations, no casts appeared. Morphia was given in increasing doses to mitigate the constant suffering. All the symptoms became worse and worse. From time to time large quantities of blood were passed, sometimes mixed with pus. Albumen was always present in large quantities, and the pain in micturition became most intense. On January, 28, 1890, I was telephoned for, as there was some obstruction in the bowel. I found a hard mass blocking the rectum, which was with difficulty removed. Three days later a second mass presented, and was removed under chloroform. The chloroform was pushed to complete anæsthesia, and I then proceeded to explore per rectum. I easily mapped out the prostate, and satisfied myself that it was normal. In the situation of the bladder I was able to make out a hard, irregular mass, movable and, to a bimanual examination, apparently about the size of the gravid uterus at the fourth or fifth week.

I now felt absolutely certain I had a case of malignant disease of the bladder to deal with. From the feel of it I judged it to be most probably scirrhus cancer, involving principally the fundus.

From this time my father began rapidly to sink. The suffering became so terrible that he was kept more or less constantly under chloroform, as the morphia seemed to lose all power, an injection of 4½ grains producing no appreciable effect. He died February 15th, 1890; the duration of the case, from the earliest onset of symptoms, being therefore about one year and three months. From May 30th, 1889, to Feb. 15th, 1890, my father took over 2,000 grains of morphia hypodermically, and that with only partial relief to the suffering.

Remarks:—The specimen showed a growth on the posterior wall, which it infiltrated, measuring about 1¼ in. in width, 1½ in. in depth, and 1 in. in thickness. Over its free surface were numerous elongated papillæ which formed a fringe-like covering to the growth. The tumor had not a very firm consistence although it had been in methylated spirits for two weeks.

In the discussion which followed, Drs. Mullin, Malloch, and Olmsted dissented from the view of it being scirrhus.

Dr. H. S. Griffin reported the following case of

OOPHORECTOMY FOR CHRONIC OVARITIS.

Mrs. H., æt. 41, married, multipara; family history poor, several members having died of phthisis. Spare, nervous, menstruation regular.

December 3, 1888, on making an emergent night visit, I found her suffering from intense pain referred to the lower part of the back and extending into the left inguinal region. She gave a history of previous tenderness and uneasiness in the same locality, extending over several weeks, but not sufficiently severe to call for treatment. A vaginal examination discovered a small sized mass posterior to the uterus, movable but intensely tender; making steady pressure in Campbell's position I readily succeeded in placing it above the pelvic brim. This relieved the intense pain, but considerable distress and soreness still remained. She was instructed to lie on the face and side as much as possible.

December 4th to 14th. A few hours after replacing the ovary it again prolapsed, with return of the severe pain. It was quite impossible for her to retain a pessary, but persistent attempts were made to support the ovary with cotton wool tampons, aided by rest and posture. It would, however, invariably descend within twenty-four hours, and have to be replaced with the finger. Nausea and anorexia were prominent symptoms.

December 14. Menstruation occurred with amelioration of her condition. She was able to be up and attend to her household affairs to some slight extent.

January 2nd to 12th. The severe pain returned. All local treatment seemed only to aggravate the trouble and irritate the parts. She had to be constantly visited, and the ovary replaced. Until the beginning of March this condition persisted. Then occurred an improvement, and for two weeks she did not require a single visit.

March 22nd. In response to a call, I found her suffering intensely. Examination showed the ovary firmly pressed down, and so intensely painful that I had to abandon attempts at reduction. Under sedatives and hot water

douches, I was able to replace it on the 28th. I still hoped that patient treatment would succeed in releasing her, but towards the end of April it was apparent that operative measures were necessary. She had become unable to take sufficient nourishment, and loss of rest with continuance of the pain had greatly reduced her.

April 30th. Operated at 11 a.m. Dr. Miller gave chloroform, and Dr. Leslie assisted in the operation. A two inch incision in the usual place enabled me to hook up the left ovary from Douglas' pouch. The pedicle was tied and dropped, the right ovary examined and found normal, and the wound closed. Operation occupied about twenty minutes. On returning to the patient a few hours after, I found her suffering from the most severe retching I ever saw. It was promptly relieved, however, by a half grain hypodermic of morphia.

May 14th. The patient convalesced rather slowly, owing to irritability of the stomach. The temperature, which was 100° on the day of the operation, has never reached that point since, and is now normal.

June 1st. Patient able to leave her room and feeling quite well.

Since then (nearly a year ago) she has enjoyed perfect health, and has never had a pain since the day of the operation. The ovary removed was slightly enlarged, and had three small cysts about the size of marrow-fat peas.

NEW YORK ACADEMY OF MEDICINE. SECTION ON ORTHOPÆDIC SURGERY.

Stated Meeting, Mar. 21st, 1890.

V. P. Gibney, M.D., Chairman.

Dr. John Ridlon presented a case for diagnosis.

Dr. Gibney considered it a case of

CERVICAL ROTARY SCOLIOSIS,

with a cyst over the scapula. He had seen one or two cases of cystic tumor in this region; and the diagnosis of scoliosis was made by the position of the right shoulder, the drawing of the head to that side, and on the patient's bending forward, a deviation of the spine to the right.

Dr. Samuel Ketch agreed in the diagnosis of rotary lateral curvature, which he thought was congenital.

Dr. L. Putzel found some enlargement of the spine of the scapula, and muscular spasm of all the muscles inserted into the inner border of the scapula.

Dr. A. B. Judson thought there was evident scoliosis.

Dr. W. R. Birdsall was of the opinion that most of the deformity was the result of muscular spasm. An electrical examination ought to settle the question.

Dr. A. M. Phelps said that in a growing child such a condition of scoliosis was often secondary to muscular spasm.

Dr. Ridlon said that he had been unable to obtain any history which would account for an irritative lesion at birth; and he had only just learned that the child had been etherized by Dr. Gerster two days ago, and that the swelling had entirely disappeared.

Dr. T. Halsted Myers presented a case of

DOUBLE CONGENITAL MALFORMATION AT THE KNEE, WITH HYPER EXTENSION AND TALIPES.

The patient was born at term, after an easy labor by a breech presentation. The feet had been closely applied to the head, and the quantity of liquor amnii had been normal. The marked flexion of the thighs had been gradually overcome at the end of eight months; but at the age of sixteen months, the thighs could not be extended beyond the straight position; both legs were hyper-extended to 140 degrees; there was equino-varus, marked on the left side, and moderate on the right. Neither patella could be felt. The inter-condylar grooves were shallow; the tibiæ glided forward into partial dislocation, and there was marged genu-valgum, with abnormal lateral mobility at the knee. The body was otherwise normal, and there were no evidences of cerebral defect. The muscles responded well to the Faradic current, but in a less degree on the right side. The flexors of the thigh were in constant active contraction, and the condition of the posterior leg muscles seemed to be one of structural change. The deformity had been considerably reduced in two weeks, by means of a brace, which maintained flexion at the knee.

Dr. Myers presented brief notes of several cases which had been already reported by some of the members of the section. The absence

of cerebral symptoms in these cases, pointed to the cord as the seat of the lesion. The muscular spasm seemed to disappear about the third year, or even earlier; and the prognosis, as regards the usefulness of the limbs, was very good. There was nothing in these histories, however, to show that the fœtus had maintained the position found at birth. This position approximated the insertions of the anterior thigh group and the posterior leg group, which might very easily account for the structural changes in the muscles and consequent shortening and deformity. Nor was it surprising that the patella, which was practically a part of the quadriceps tendon, should share in this mal-development; but the character of the labor itself ought to have but little influence, as the cartilage of the patella appeared in the third month of fœtal life.

Dr. R. H. Sayre related the history of a similar case, and exhibited photographs, showing the condition immediately after birth, and again six months later. The labor and the quantity of liquor amnii had been normal and no cause could be assigned for the condition.

At the present time the leg could be flexed on the thigh to about forty-five degrees, and extension was possible only to a straight line. The shortening was three-quarters of an inch. No patella had yet been found.

Dr. Ketch said that in a collection of fifty-six cases of congenital dislocation, reported by Dr. Hubbard and himself, there was only one congenital dislocation of the knee, and this was unilateral.

The literature of the subject was still very meagre, Noble Smith being the only author he had found who spoke of the condition at length. The treatment which this author advocated yielded uniformly good results.

Dr. LeRoy W. Hubbard, by invitation, presented the report of a case of

POTT'S PARAPLEGIA TREATED BY SUSPENSION,

after the method suggested by Motchoukowski. The case was one of those untractable ones that had resisted ordinary methods of treatment. Drs. Ketch and Hubbard employed daily suspension for a few minutes, and a decided daily improvement was noticed within a month, but a complete cure had not been established up to the time of the report.

Dr. Putzel said that his pathological studies had led him to believe that the majority of cases of Pott's paraplegia were not due to pressure, but to a transverse myelitis; and his experience with the treatment by suspension had taught him to consider it a method which was, at best, only a temporary relief. Very rapid improvement often followed many methods of treatment. Large doses of iodide of potassium had not yielded him very satisfactory results. It was important to remember that the disease showed a strong tendency to spontaneous recovery.

Dr. Birdsall thought that where Pott's paraplegia was due to myelitis the disease was fatal; but many cases were due, not to a myelitis, but to irritation and pressure on the anterior or posterior roots of the nerves in their passage through the foramina. Among the various theories which had been advanced concerning the action of suspension, he thought that the most plausible one attributed the beneficial action to a slight separation of the vertebræ, with consequent improvement in the circulation of the affected parts, particularly the nerve roots. This was what might be expected from our knowledge of nerve stretching; and on this account, he thought the method somewhat dangerous. For many months after Charcot called attention to the method, the literature of the subject was very extensive; but more recently it had become quite scanty. It was particularly strange that these early investigators had not furnished any later reports.

Dr. L. C. Gray said that excluding those cases which were complicated by organic lesion of the cord, he thought that the etiology of Pott's paraplegia could be explained by reflex causes. Nerve-stretching in this disease was a very different thing from what it was in locomotor ataxia. The latter disease had a very complicated pathology, and embraced several distinct varieties. It was a very significant fact, that the results claimed by Charcot had not been obtained by other observers. He did not think that the treatment by suspension, when properly managed, was dangerous; and where the paraplegia was of reflex origin, he would look for temporary relief, and in milder cases even a cure was not impossible.

Dr. W. R. Townsend reported two cases

which he had treated by extension in bed, according to the method described by Wm. J. Fleming, in the *Lancet* for 1889. He had modified the arrangement for extension, by using a jacket around the pelvis, with straps passing down on each side. Both cases had received large doses of iodide of potassium in addition to extension, and both showed the improvement noted in Dr. Hubbard's case.

Dr. Ridlon said that he had made use of large doses of iodide of potassium, the actual cautery, and of horizontal traction while in bed; but he had been unable to see any favorable modification of the disease by any of these methods. He now kept his patients on their backs, and waited for them to get well. One case recovered perfectly after three years.

Dr. Ketch said that he had suggested the use of suspension in the case reported by Dr. Hubbard, after the paralysis had lasted for about three years, and had not been improved by recumbency, or the use of iodide of potassium.

Dr. R. H. Sayre said that the treatment of Pott's paraplegia by suspension had been practised as long ago as 1828, by J. K. Mitchell, of Philadelphia. Suspension failed to give relief when carried to excess, and it was dangerous if injudiciously applied. These cases should not be left untreated, for their chances of becoming permanently paralyzed were thereby increased. Constant traction by means of the "jury mast," and traction with recumbency, were both very useful methods. By making use of extension with the patient in the "wire cuirass," his father had been able to employ traction with recumbency, without depriving the patient of the benefits of fresh air.

Dr. Phelps considered that the employment of suspension, at a period when the disease was still active, was bad practice; and the great majority of cases recovered, if the spinal column were only fixed.

Dr. Hubbard did not think that pressure on the nerve roots could be of common occurrence, for sensory symptoms rarely appeared, and then only in the later stages.

Dr. A. B. Judson read a paper entitled,

A CRITICISM OF WILLETT'S OPERATION FOR TALIPES CALCANEUS.

He stated that in this affection the deformity was of less importance than the disability, which prevented the patient from resting on the toe in walking—a disability which Mr. Willett sought to remove by shortening the tendo Achillis. The writer demonstrated that the tension on the heel-cord greatly exceeded the weight of the body; and expressed the opinion that the tendon, shortened by operation, would not long endure the strain without yielding He advocated the mechanical treatment of this disability, and presented a brace which was easy to apply, convenient to wear, and inexpensive.

Dr. W. E. Wirt, by invitation, gave a mathematical demonstration, showing that Dr. Judson in his calculations did not make any allowance for the action of the other muscles; and that when these were considered, it was found that the tension sustained by the tendo Achillis was at no time more than 1.4 times the weight of the body.

Dr. Royal Whitman, by invitation, read a paper on the

RATIONAL TREATMENT OF FLAT FOOT,

and showed some plaster casts of cases he had treated.

Dr. Willy Meyer presented two cases of flat foot which he had treated by supra-malleolar osteotomy, and showed photographs and casts illustrating the condition of the patients before and after the operation. He considered the method a most rational one; for it required the patient to step upon the outer border of the foot, so that the weight of the body was transmitted through the cuboid, instead of through the scaphoid bone. Dr. Whitman's results were excellent; but they had been obtained in comparatively young subjects after six months of treatment. The method which he advocated would secure permanently good results in as many weeks.

Dr. R. H. Sayre remarked that Mr. Golding-Bird, who was the first to do these operations, found less frequent occasion than formerly to resort to this method, as he was able by non-operative measures to relieve pain, and in great measure, to remove the disability.

LEGACY TO THE POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.—Among the legacies of the late Honorable D. B. St. John, of Newburgh, N.Y., was one of ten thousand dollars to the above named institution.

Hospital Reports.

REMOVAL OF A LOOSE BODY FROM THE RIGHT KNEE JOINT—CURE.

UNDER THE CARE OF R. E. NEVITT, B.A., M.D., IN THE TORONTO GENERAL HOSPITAL.

O. G., æt. 24, admitted March 24, '90—a strong, healthy, well-built man. On the fifteenth day of last November, while walking, he stepped upon a limb of a tree in such a manner that the limb fitted into the hollow of his foot and caused him to twist his leg; he fell forwards and was unable to rise. He then found it impossible to completely extend his leg at the knee joint. Flexion of the leg on the thigh was possible, and he could straighten it up to a point when the leg formed an angle of 120° with the thigh; further extension was impossible, and all attempts to bring about complete extension caused excessive pain. There was a slight amount of swelling after the accident, but no pain as long as the joint was kept at rest; he walked about without discomfort, save that which arose from the flexed condition of the limb. He consulted a doctor and, following his directions, blistered the knee, he then tried rubbing with turpentine, and subsequently rubbed the joint with oils of various kinds. These forms of relief failed to give him relief until one night, two months after the accident, while rubbing it vigorously with "coon oil' he was able to straighten the limb for the first time. He began to walk on the straightened limb, and then he observed that "a little bone" had come out and lodged on the *left* side of the joint. At night he rubbed the joint with turpentine, and the following morning found the loose body out on the *right* side of the joint. It subsequently kept moving out and in for months; the joint was stiff very frequently, especially when kept at rest for some hours, but, after exercise, movement in the joint became more free. The only pain he suffered was when the loose body came "out," aud it was his constant endeavor to keep it under the quadriceps extensor tendon, where it seemed to lodge without giving the patient any annoyance whatever. He was admitted to the hospital under the care of Dr. Nevitt. There was some difficulty in getting the loose body to appear, and the patient was told that when it did appear he was to fix it in position by applying a pad between the extensor tendon and the loose body; this was done and a turn of bandage held the pad in its place; the loose body at length appeared on the left side of the joint. Dr. Nevitt fixed it by means of a needle and cut down upon it; unfortunately, however, it slipped back into the joint, and could not be recovered; the wound was dressed and the attempt to secure the body was postponed. A few days after, on April 18th, the patient had again fixed the body, this time on the right side of the joint. Dr. Nevitt secured it in position by pressing it firmly with the thumb, the pressure was directed upwards and backwards, so as to force it away from the joint and extensor tendon as much as possible. An incision three-quarters of an inch long was made, and the various structures divided, including the joint capsule, when the loose body slipped out without any difficulty. A stitch was inserted and dressing applied. The wound healed perfectly, and the joint is now perfectly healthy and free from all pain. Most careful antiseptic precautions were taken during both operations, and the wounds were thoroughly aseptic throughout the healing process.

The loose body was a cartilaginous nodule, irregularly pear-shaped, 5/8ths of an inch in length and its greatest width 3/8ths of an inch. The apex of the pear was soft and pliable as if it had at one time been attached by a fibrous pedicle.

Pathology.

PRIMARY CANCER OF THE GALL-BLADDER AND ITS RELATION TO GALL-STONES AND CICATRICES OF THE GALL-BLADDER.—(*Centralblatt fur Klin. Med. Sept. 7, 1889.*) -In cases in which gall-bladders containing calculi are found to be cancerous, clinical observation seems to show that, in the majority, the calculi' precede the cancer. Zenker in explaining the causation of the cancer in these cases, follows the lead of Hauser in his investigations on cancer of the stomach, occurring after ulceration. The theory advanced by Hauser is, that the cicatrization of gastric ulcers sets up an abnormal proliferation of the glandular epithelial elements, and this process becoming chronic under prolonged irritation, ends in the carcinomatous growth. In the case of the gall-bladder, the

calculi cause ulceration, and after cicatrization has begun, supply the chronic irritant which excites the irregular epithelial growth.

J. C.

THE GERM OF DISTEMPER IN DOGS.—Probably the latest discovery of a pathogeuic microbe is that of the bacillus of distemper in dogs, by Mr. Everett Millais of St. Thomas Hospital, London. A full account of his experiments is given in the *British Medical Journal* of April 12, 1890. In addition to isolating the germ which produces the specific catarrhal symptoms of distemper, Mr. Millais has shown that the pneumonia, which is so frequently a cause of death in this disease, in all likelihood depends upon a micrococcus found along with the bacillus. The micro-organisms were found to be present in both the sero-mucous discharge from the nasal passages of the dogs, and in the internal organs examined, viz., lungs, liver, spleen and kidneys. Experiments with attenuated virus, to bring about protection, were quite successful.

J. C.

Correspondence.

Editor of CANADIAN PRACTITIONER.

DEAR SIR,—At a meeting of the Ottawa Medico-Chiurgical Society, held on Friday evening last, the 11th inst., the following resolution, a copy of which I am directed to forward you, was unanimously passed: "Moved by Dr. John Sweetland, seconded by Dr. A. J. Horsey, that this society desires to express its sincere hope that Dr. Edward Playter, of this city, be appointed a member of the Provincial Board of Health, not only because of his well known and acknowledged ability as a sanitarian, but also because there is no representative on the said board from the whole of the eastern portion of the Province of Ontario. It is further resolved that a copy of this resolution be sent to the Honorable Charles Drury, Minister of Agriculture, Toronto; E. H. Bronson, Esq., M.P.P., the *Canada Lancet* and the CANADIAN PRACTITIONER." I am, dear sir, yours truly,

A. F. ROGERS, M.D.,
President.

Ottawa, 14th April, 1890.

Book Notices.

Wood's Medical and Surgical Monographs. Vol 5, No. 1, Feb., 1890. Wm. Wood & Co., New York.

In the February number of this well known publication are contained, "Action of Uric Acid in the Causation of Disease," by A. Haig, M.D.; "Initial Stages of Consumption, their Nature and Treatment," by Horace Dobell, M.D., London; "Ectopic Pregnancy and Pelvic Hæmatocele," by Lawson Tait, M.D.

Practical Electricity in Medicine and Surgery. By G. A. Liebig, Ph.D., Assistant in Electricity, Johns Hopkins University; G. H. Rohé, M.D., Professor of Obstetrics and Hygiene, College of Physicians and Surgeons, Baltimore. F. A. Davis: Philadelphia.

The fundamental principles of electricity involved in its application to medicine and surgery are stated concisely and without unnecessary technicalities. After a brief discussion of the various forms of electrical apparatus used by the physician, the effects of electric currents upon the healthy body, and their application to the treatment of disease are considered. The object of the authors, as stated in their concluding paragraph, is worthy of all praise:

"Less attempt has been made to include everything written upon the subject than that nothing untrue should be contained within the covers of this book."

The International Medical Annual and Practitioners' Index for 1890.—Edited by P. W. Williams, M.D., Secretary of Staff, assisted by a corps of thirty-six collaborators—European and American—specialists in their several departments. 600 octavo pages. Illustrated. $2.75. Wright & Co,, Bristol; E. B. Treat, 5 Cooper Union, New York; J. A. Carveth & Co., Toronto.

This *Medical Annual* now has a world-wide reputation. From year to year its popularity has been steadily increasing, and the eighth volume, which is now offered to the profession, is probably the best of the series. It presents a *resumé* of all the most important points in connection with new remedies and new treatment that have been published during the past year. The list of contributors is a most admirable one, including, as it does, the names of distinguished

men well known to the medical word. It is really a digest of the best articles and the best books published during the past year in all departments of medicine. It will enable the busy practitioner, in the easiest possible way, to keep well abreast of the times. We have much pleasure in advising our subscribers to obtain the book as speedily as possible.

Diseases of Women and Abdominal Surgery.—By Lawson Tait, F.R.C.S., Edin. and Eng., LL.D., Professor of Gynecology in Queen's College, Birmingham, etc. Vol. I. Philadelphia: Lea Brothers & Co.

This work has been looked for with considerable interest for some time. It will give the profession much pleasure and profit to read the first volume, which may now be obtained from the booksellers. It will probably be generally admitted that Lawson Tait is the greatest of abdominal surgeons. In this comparatively new field he has, to a certain extent, revolutionized surgery. He has reached the summit amidst, perhaps, the strongest opposition that has ever been shown by the high and mighty surgeons of big London against any upstart in a provincial town. His aggressive pugnacity is quite equal to his surgical skill. He dearly loves a fight, and pines for it when it comes not frequently.

Mr. Tait is original as a surgeon, a pugilist, and a writer. No one exactly like him has ever lived—he will likely never be reproduced. We need scarcely introduce him to our readers. Everybody knows him. What he writes is the experience of Lawson Tait—there is no mistake about that; what he tells us are the opinions of Lawson Tait—there can be no difference of opinion about the matter. This work is Lawson Tait's book, written after the style of Lawson Tait. This is about the best description we can give of it in a few words, and we will not attempt to write anything like a review.

Births, Marriages and Deaths.

BIRTHS.

BRAY.—At 411 Parliament street, Toronto, on Sunday, March 30th, the wife of Dr. James Bray, of a daughter.

MARRIAGES.

NATTRESS-DENISON.—In Toronto, on April 10, at St. Anne's church, by the Rev. George Nattress, assisted by Rev. J. MacLean Ballard, W. Nattress, M.D., to Julia A., third daughter of Lieut.-Col. George T. Denison, Heydon Villa.

NEWMAN-SCOTTEN.—At St. Paul's church, Detroit, April 15th, by the Right Rev. G. D. Gillespie, Bishop of Western Michigan, assisted by Rev. Rufus Clarke, Rector, R. Addington Newman, M.D., Detroit, to Bessie, only daughter of Mr. Daniel Scotten, Sunnyside, Detroit.

DEATHS.

CLAPP.—April 22nd, suddenly, at his residence, 185 Church street, Toronto, Dr. J. C. Clapp, in his 61st year.

CRAIG.—On April 19th at the residence of her son-in-law, T. Millman, M.D., Toronto, Mary, relict of late John Craig, of Woodstock Ont., in her 68th year.

DOHERTY.—On Monday, April 14, Rev. Albert Doherty, Presbyterian minister, youngest son of Dr. Doherty, Markham.

MEDICAL EXAMINATIONS.

The results of the recent Examinations in Medicine in the University of Toronto were as follows:

FIRST EXAMINATION.

Anatomy—Class I.—R. J. Hastings, T. B. Futcher, J. B. Peters, T. E. South, J. N. Harvie, B. Kilbourn, W. Elliott, F. Martin, H. W. Hill, J. H. Austin, F. A. Dales, W. C. Freeman, E. E. Harvey.

Class II.—C. W. Thompson, F. E. Grant, F. J. Ball, F. Blanchard, C. J. Laird, H. A. McCullough, J. King, S. H. McCoy, W. C. Beemer, J. J. Williams, R. J. Smith, J. M. Rogers, J. E. Lehmann.

Class III.—J. H. Shouldice, W. E. Olmsted, C. J. Taylor, R. D. Alway, F. G. Pearson, W. P. Thompson, D. McAlpine, W. H. Lambert, J. A. Malloy, D. Marr, H. F. McKendrick, J. D. McLean, H. D. Pease, S. G. Story, G. S. Glassco, J. H. McGarry, W. D. McNab, J. McArmstrong, J. A. McNaughton, E. A. Fraser, K. C. McIlwraith, F. W. Pirritte, A. H. Tegart, S. H. Large, W. F. Park, G. H. Towner, J. R. MacKenzie, A. F. Rykert, J. H. Hudson, T. Coleman, C. W. Webb, F. H. Moss, F. B. Wakefield, A. E. Douglas.

Physiology—Class I.—E. E. Harvey, Hill, Rykert, Harvie, South

Class II.—Rogers, McAlpine, Pease, Hudson, McNaughton.

Class III.—McCullough, Malloy, Peters, Dales, Ball, Martin Hastings, Elliott, McIlwraith, Pearson, Pirritte, Lehmann, J. R. Mackenzie, Fraser, A. E. Leitch, Taylor, Futcher, McNab, Tegart, Park, McLean, Smith, King. Thompson, McGarry, Williams, Austin, Marr, Story, Coleman, Olmsted, Laird, Armstrong, Thompson, Wakefield, Glassco, McKendrick, Shouldice, Beemer, Alway, Blanchard, Lambert, Large, Freeman, Grant.

Zoology (only)—Class III.—S. D. Day, J. J. Gee.

Chemistry—Class I.—Harvie, Lehmann, E. E. Harvey, Hastings, Hill, Park, Smith, South.

Class II.—Futcher, Austin, Rykert, Alway, Malloy, Taylor, Elliott, McCullough.

Class III.—Ball, L. H, Campbell, Pearson, Hudson, Marr, Martin, McGarry, Glassco, Laird, Williams, McAlpine, Story, Coleman, McNaughton, Rogers, Tegart, Wakefield, Dales, J. Farrow, Lambert, Large, Towner, Douglas, Leitch, Mc-

Ilwraith, Blanchard, Pease, Thompson, McKendrick, Thompson, Webb, Olmsted, Armstrong, King, Fraser, Grant, Shouldice, J. R. MacKenzie, Pirritte, Beemer, Moss

Biology.—Class I.—South, Thomson.

Class II. McCullough, Ball, McAlpine, Futcher, Harvie, Taylor.

Class III.—McIlwraith, Martin, Pease, Smith, Grant, E. E. Harvey, Blanchard, Hastings, Austin, McNaughton, Rykert, Towner, Peters, Rogers, Thompson, Miss M. Foster, Freeman Olmsted, Dales, Laird, Miss E. H. Paterson, Tegart, Alway, Beemer, J. R. McKenzie, Pearson, Pirritte, Hill, Hudson, Lehmann, Elliott, McNab, J Farrow, Glassco, Maclean, Coleman, King, R. M. Caider, Marr, Shouldice, Large, McKendrick, Story, Armstrong, Fraser, Williams, Malloy, Lambert, McGarry, Park, Leitch, Douglas, Webb.

C. H. Bull obtained third-class standing in anatomy, physiology, and biology.

E. Hambly obtained third-class standing in anatomy and chemistry.

G. A. Harvey obtained first-class standing in chemistry, and third-class in anatomy, physiology and biology.

J. D. Leith, M. E. Kiteley and J. R. Hopkins obtained third-class standing in each subject.

W. J. McKenzie obtained first-class stauding in anatomy and second-class in physiology, chemistry and biology,

W. J. Smuck obtained second-class standing in physiology and chemistry, and third-class in anatomy and biology.

P. D Tyerman obtained first class standing in anatomy, second-class in chemistry and third-class in physiology and biology

F. C. Whitelock obtained second-class standing in anatomy and physiology and third-class in chemistry and biology.

To be allowed to proceed on passing at the supplemental examinations in September next, as follows :-

Anatomy Leitch. Physiology Douglas, Hambly, Towner, Webb. Chemistry—Bull, Freeman, Maclean, McNab. Biology—Hambly, Wakefield.

SECOND EXAMINATION.

Anatomy—Class I.—H. A. Bruce, J. A. Wilson, T. H. Middlebro, G. W. Gould, C. C. Richardson, J. F. Ross.

Class II.—R. H. Gowland, R. H. Green, B. Kilbourn, J. H. Youell, J. McAsh, H. J. Way, P. McG. Brown, J. A. Evans, A. Montgomery, L. N. McKechnie, J. A. Hershey, H. M Lloyd, J. N. Brown, D. A. Clark, F. H. Heming, Miss E. H. Paterson, F H Hagerman.

Class III.—F. K. Armstrong, *J. Farrow, J. A. Cowper, W. Crawford, J. Dargravel, G. H. Bowles, W. Chambers, R. F. Forrest, S. H McCoy, J. J. Harper, E. G. Smith, Miss M. Foster, R. J Teeter, W A Campbell, H. A Wardell, W H. Tye, F. H. Moss.

Physiology—Class I.—Middlebro, Bruce.

Class II.—McAsh. Richardson, Gould, J. A. Wilson, R. H. Green, Youell, Miss E. H. Paterson.

Class III.—J. N Brown, Kilbourn, McKechnie, Armstrong, Crawford, Forrest, L. H Campbell, Lloyd, McCuen, Montgomery, P. M Brown, Chambers, Gowland, Cowper, Hagerman, W. A. Campbell, Ross, Evans, Hemming, Harper, Clark, Hershey, Tye, Teeter, Miss M. Foster, Moss, Smith, Wardell, Way, Bowles, G K Shirton.

Medical Chemistry (only).—Class I.—McCoy, T. E. Bennett.

Class III.—J. S. Agar.

Materia Medica - Class I.—J. A. Wilson, Richardson.

Class II —Lloyd, Cowper, R. H. Green.

Class III.—Heming, Kilbourn, Gould, Ross, Forrest, Middlebro, P. M. Brown, McAsh, Bruce, Youell, Miss E. H. Paterson, Chambers, T. H. Jamieson, Evans, Armstrong, H. H. Oldright, Clark W. A. Campbell, Gear, Harper, Bowles, McCoy, J. N. Brown, Montgomery, A. E. Awde, McKechnie, Hagerman, Smith, Farrow, Gowland, Crawford, Tye, L. H. Campbell, T. H. Henry. F. T. Green, Way, S. Blackney, Wardell, W. I. Senkler, Miss M. Foster, Teeter, Hershey, McCuen.

Chemistry (Organic and Medical).—Class I.— Bruce, Middlebro, Armstrong, Cowper, Kilbourn, Gowland, Lloyd, P. M. Brown, J. A. Wilson, Youell, Gould, R. H. Green, W. A. Campbell.

Class II.—J. N. Brown, Chambers, Miss E. H. Paterson, McAsh, Tye, Moss.

Class III.—Clark, Forrest, McKechnie, Way, Harper, Hershey, Crawford, Farrow, Montgomery, Miss M. Foster, Ross, Bowles, Heming, Wardell, Evans, Hagerman, T. H. Henry, Smith.

Organic Chemistry (only) Class III.—D. McLean, W. I. Senkler, A. E. Awde, A. Boultbee, Shirton, F. T. Green, J. Forrest. J. Dargavel, S. Blackney.

Histology—Class I.—Middlebro, Bruce, Richardson, Ross, McAsh.

Class II.—Youell, Gowland, R. H. Green.

Class III.—Gould, Cowper, Armstrong, J. N. Brown, Lloyd, McKechnie, Teeter, J. A. Wilson, Kilbourn, Tye, Forrest. P. M. Brown, Miss E. H. Paterson, Bowles, W. A. Campbell, Heming, Chambers, Hagerman, Way, Harper, Clark, Crawford, Miss M. Foster, Hershey, S. Blackney, Montgomery, Smith, Moss, Evans.

To be allowed to proceed upon passing at the supplemental examinations in September next, as follows :—

Physiology—Farrow. Materia Medica—Moss. Histology —Farrow, Wardell.

W. F. Brown obtained first-class standing in anatomy and chemistry, and second-class in physiology, materia medica, and third-class in histology.

H. Gear obtained first-class standing in chemistry, second-class in anatomy, third-class in physiology, histology, and materia medica.

G. L. McBride obtained third-class standing in materia medica, anatomy, physiology, chemistry, and histology.

A. Skippen obtained second-class standing in physiology, third-class in anatomy, materia medica, chemistry, and histology.

W. T. Wilson obtained third-class standing in anatomy, physiology, materia medica, chemistry, and histology.

THIRD EXAMINATION.

Medicine—Class II—J. E. Hett, J. Dow, *D. F. Webster, J. R. Arthur, *A. Boultbee, *J. W. Edgar, *O. Teeter.

Class III.—J. A. Amyot, G. Boyd, *W. I. Senkler, A. E. Clendenan, M. Dunning. W. F. Langrill, G. McGorman, *A. E. Awde, W. N. Barnhart, P. Bollen, *T. E. Bennett, P A. Gillespie R. C. Griffith, *G. McKenzie, R. J. Crawford, J. Watson, A S. Blueglass, R. H. Mason, *H. P Millard, R. J. Dwyer, *J. H. Clossen, S D. Day, *J. Forrest, J. H. Wasley, *B. E. Thompson, *T. H. Henry, *D. McLean, A. W. Heaslip.

Clinical Medicine—Class I.—McGorman, Barnhart, Langrill, Dwyer, Amyot.

Class II.—Bollen, *McCullough, Boultbee, Boyd, Crawford.

Class III.—Bennett, Day, McLean, Arthur, Dow, McKenzie, Heaslip, Wasley, Dunning, Forrest, Webster, Gillespie, Clendenan, Hett, Millard, Watson, Thompson, Griffith.

Surgery -Class I. Bollen, Dunning, McGorman, Barnhart, Watson, Langrill, Wasley, Amyot, McCullough, McKenzie, *F. H. Wells, Webster.

Class II.—Thompson, Henry, Senkler, Boyd, Hett, Clendenan, Forrest, Edgar, Gillespie, Griffith, Awde, Dow.

Class III.—Crawford, Arthur, Millard, Teeter, McLean, Day, Bennett, Heaslip, Closson, Dwyer, Boultbee.

Clinical Surgery—Class I.—Barnhart, Bollen, Day, Amyot, Griffith, Boyd, Hett, Teeter.

Class II.—McCullough, Watson, McGorman, Millard, Wells, Clendenan, Closson, Boultbee.

Class III.—Dwyer, McLean, Awde, Dow, Langrill, Arthur, Heaslip, McKenzie, Gillespie, Webster, Dunning, Forrest, Henry, Wasley, Crawford, Edgar.

Surgical Anatomy.—Class I.—Barnhart, Arthur, Bollen.

Class II. -McGorman, Dow, Langrill.

Class III.—McKenzie, Heaslip, Boyd, Dunning, Crawford, Thompson, Boultbee, Hett, Wasley, Watson, Amyot, Henry, Bennett, Closson, R. Shield, Clendenan, Gillespie, Griffith, McCullough, Millard, Teeter, Day, J. E. Forfar, Wells, T. Russell, Dwyer, Senkler, Edgar, Awde, Forrest,

Obstetrics.—Class I.—Bollen, McGorman.

Class II.—Dunning, Boyd, Barnhart, Teeter.

Class III —Crawford, Arthur, Dwyer, Bennett, Griffith, Day, Heaslip, Edgar, Hett, Amyot, Wasley, McCullough, Senkler, Dow, Forrest, Boultbee, Wells. Thompson, Watson, Langrill, Webster, Henry, Millard, R. H. Mason, Awde, Clendenan.

Pathology and Pathological Histology—Class I.—Bollen, McGorman, Amyot, Barnhart.

Class II —Griffith, Edgar, Arthur, Langrill.

Class III.—Watson, Day, Hett, Dunning. McCullough, Thompson, Boultbee, Boyd, Wells, Wasley, Teeter Gillespie, Webster, Henry, Dwyer, Clendenan, McKenzie, Bennett, Awde, Dow, Crawford, Millard, McLean Heaslip.

Therapeutics—Class I.—Boyd, McGorman, Barnhart, Bollen, Crawford.

Class II.—Langrill, Amyot, Bennett, Arthur, McLean, McKenzie, Wasley.

Class III.—Day, T. H. Henry, McCullough, Millard, Dow, Gillespie, Clendenan, Dunning, Griffith, Thompson, Hett. Forrest. Dwyer, Heaslip, Senkler, Watson, Teeter, Wells, Webster.

To be allowed fourth year standing upon passing at the supplemental examinations in September next as follows

Medicine—McCullough, Wells.

Clinical Medicine—Awde, Closson, Edgar, Henry, Senkler, Teeter, Wells.

Clinical surgery—Bennett, Senkler, Thompson.

Surgical anatomy—McLean, Webster.

Obstetrics—Closson, Gillespie, McKenzie, McLean.

Pathology—Closson, Forrest, Senkler.

Therapeutics—Awde, Boultbee, Closson, Edgar,

Organic chemistry of second examination—Millard.

R. J. Chrystal obtained second-class honours in clinical surgery, pathology, and therapeutics and pass ir remaining subjects.

E. P. Gordon obtained first-class honours in obstetrics, second-class in surgery and clinical surgery, and pass in medicine, clinical medicine, and pathology.

C. F. McGillivray obtained first-class honours in surgery, clinical surgery, surgical anatomy, obstetrics, pathology, and therapeutics, and second-class in remaining subjects.

FOURTH EXAMINATION—FOR M.B. DEGREE.

Medicine.—Class I.—L. F. Barker, T. S. Cullen, W. McGillivray, W. C. Morrison, M, T. McFarlane, D. Archer, A. R. Gordon, D. H. Hutchison, T. Russell.

Class II.—A. V. Michell, W. M. Pugh, C. B. Carveth, W. W. Baldwin, F. Zwick, G. T. Bigelow, J. E. Forfar, J. A. Robinson.

Class III.—J. H. Burger, W. H. Philp, E. F. Irwin, A. S. Bueglass, J. L. Smith, C. L. Starr, J. A. Macdonald, R. Shiell.

Clinical Medicine.—Class I.—Barker, Cullen, Philp, A. R. Gordon, Morrison, Zwick.

Class II.—Starr, Forfar, Irwin, Macfarlane, Russell, Smith.

Class III.—Michell, Pugh, W. McGillivray, Shiell, Archer, Carveth, Bueglass, Hutchison, Macdonald, Burger, Robinson, Bigelow, Baldwin, W. J. Earley.

Surgery.—Class I.—Barker, Macfarlane, Morrison, Cullen, Baldwin, Philp, Shiell.

Class II.—Zwick, Pugh, Bigelow, Carveth, A. R. Gordon, W. McGillivray, Starr, Forfar, Michell, Burger, Irwin, Russell, Smith.

Class III.—Macdonald, Archer, Bueglass, Hutchison, Robinson.

Clinical Surgery.—Class I.—Barker, Cullen, W. McGillivray, Bueglass, Hutchison, Russell, Philp, Zwick, Michell, Starr.

Class II.—Archer, A. R. Gordon, Forfar, Macfarlane, Bigelow, Baldwin, Macdonald, Pugh.

Class III.—Carveth, Smith, Shiell, Morrison, Irwin, Burger, Robinson.

Gynæcology.—Class I.—Barker, Carveth, Baldwin, Philp.

Class II.—Bigelow, Starr, Macfarlane, Archer, Smith.

Class III.—A. R. Gordon, Hutchison, Cullen, Michell, Macdonald, Pugh, Bueglass, Zwick, Burger, Irwin, W. McGillivray, Robinson, Forfar, Shiell, Russell, Morrison.

Forensic Medicine.—Class I.—Barker, Michell, A. R. Gordon, Macdonald, Macfarlane.

Class II.—Hutchison, Zwick, Bigelow, Morrison.

Class III.—W. McGillivray, Philp, Pugh, Forfar, Cullen, Robinson, Irwin, Archer, Carveth, Baldwin, Smith, Shiell, Starr, Burger, Russell, Bueglass.

Hygiene.—Class I.—Barker, Zwick, Morrison.

Class II.—Forfar, Starr, Macfarlane, Smith, Philp, Cullen, Archer, Hutchison, Michell, Carveth, W. McGillivray.

Class III.—Robinson, Bueglass, A. R. Gordon, Russell, Pugh, Baldwin, Bigelow, Burger, Irwin, Macdonald, Shiell.

Medical Psychology.—Class I.—Carveth, Irwin.

Class II.—Forfar, Starr, Shiell.

Class III.—Baldwin, Barker, Bueglass, Zwick, Hutchison, Cullen, Archer, Morrison, Macdonald, Bigelow, A. R. Gordon, Philp, Pugh, Smith, W. McGillivray, Russell, Michell, Macfarlane, Burger, Robinson.

R. J. Chrystal obtained second-class honours in surgery, clinical surgery, and gynæcology, and pass in remaining subjects.

E. P. Gordon obtained first-class honours in gynæcology, second-class in surgery, clinical surgery, and hygiene, and pass in remaining subjects, with exception of clinical medicine, in which he has to pass a supplemental examination before being entitled to a degree.

C. F. McGillivray obtained first-class honours in medicine, surgery, clinical surgery, and hygiene, second-class in clinical medicine and gynæcology, and pass in remaining subjects.

FINAL EXAMINATION FOR M.B. DEGREE

(Medicine, clinical medicine, surgery, clinical surgery, surgical anatomy, obstetrics, gynæcology, pathology, therapeutics, hygiene, forensic medicine, and medical psychology)—J. S. Agar, *M. A. Armstrong, *W. J. Blewett, W. L. Bond, W. F. Bryans, C. E. Flatt, W. N. Hay, D. L. Heggie, W. C. Herriman, A. T. Hobbs.

*Without surgical anatomy or therapeutics.

E. H. Adams and D. Smith, to take surgery at a supplemental examination, passed in other subjects.

W. A. Baker to take gynæcology and hygiene at a supplemental examination, passed in other subjects.

J. H. Gimby to take surgery, gynæcology, and forensic medicine at a supplemental examination, passed in other subjects.

A. T. Watt to take surgery and clinical medicine at a supplemental examination, passed in other subjects.

Granted degree with ægrotat standing, R. A. Hardie.

PRIMARY EXAMINATION.

Anatomy, Physiology, Materia Medica, Chemistry, Biology, and Histology—T. Beath, R. B. Potts.

Starr Gold Medal—L. F. Barker.

TRINITY UNIVERSITY.

PRIMARY EXAMINATION FOR M.D.C.M.

Class I.—Honor certificates—D. Beattie, 1st silver medalist; H. L. Barber, 2nd silver medalist; H. B. Anderson, H. C. Parsons, R. G. Wallace, J. J. Thompson, W. E. Matthew, D. McEachren, A. S. Tilley, A. Quackenbush, W. Cousens, T. M. Williamson, W. E. Brown.

Class I.—J. W. Brien, A. P. Chalmers.

Class II.—W. H. Mullen, R. M. Mitchell and W. S. Switzer, equal; W. E. Ogden, H. J. Orchard, R. M. Curts, W. Northrup and D. C. Jones equal; W. Potter, J. A. Mitchell, R. E. Cooper, W. M. Robertson, Miss J. Gray, H. Morell, E. B. Blaine, G. K. McDowall, D. A. McPherson, Miss E. R. Gray, Miss A. Chambers, H. Robins, F. L. Switzer, D. F. McCullough, A. W. Allingham, W. O'Connor.

Class III.—D. B. Alexander, J. M. Allan, W. J. Avery, F. O. Bingham, R. A. Buck, A. M. Clegg, jr., G. W. Davidson, Miss B. Diamond, R. G. Feek, A. Flath, J. G. Jardine, A. P. McClaren, L. C. Merritt, A. L. Murphy, F. C. Spilsbury, W. A. Macpherson, J. A. Ogilvie.

Passed in materia medica, practical and general chemistry and toxicology—D. B. Bently.

Passed in physiology, anatomy, practical and general chemistry and toxicology—J. W. White.

FINAL EXAMINATION

Gold medalist and certificate of honor—F. R. Clarke.

Silver medalist and certificate of honor—R. M. Hillary.

Certificates of honor—A. Gaudier, R. Hill.

Class I.—R. J. Niddrie, E. J. Boyes and A. J. Murchison equal; J. W. S. McCullough, A. Ross, J. R. McDonald, C. McCue, C. B. Oliver.

Class II.—C. A. D. Fairfield, A. H. Speers, J. Lockridge and J. F. Dolan, equal; H. H. Gray, Miss S. P. Boyle, L. E. Rice and J. M. Sitton equal; J. F. Wren, T. B. Richardson, Mrs. J. Lynd and C. B. Coughlin, equal; H. T. Arvale, J. H. Bell, E. T. Boyes, J. F. Ewing and Miss M. J. Hutton, equal; A. P. Ardagh, Miss M. Agar, O. E. McCarty, M. Mochelland, E. R. Morton, R. F. Hay, D. McLeod, W. S. Ferguson, G. Harrison, R. D. Langstaff, F. Proust, H. W. Welch, equal; G. J. Tweedlie, J. C. Bell, W. Wright.

Class III.—F. A. Drake and E. H. Webster equal; L. E. Morgan, W. A. Gray and J. Housberger, equal; J. F. B. Rogers, W. J. Fletcher, W. C. B. Murray, G. Wright, T. E. Watts, W. A. Jones, J. A. Dinwoody and D. R. McQueen, equal; J. A. McGregor, J. C. Auld, A. C. Beatty and J. D. Berry, equal; H. S. Smith, J. W. Dixon, D. A. Coon, W. A. Cameron, W. J. Alexander and J. D. Reid, equal; T. J. Todd, J. A. Mills, W. A. Sargent, J. J. Gee, W. O'Connor, T. P. Camelon, M. Claverley, C. W. Morey, H. E. Strathy.

VICTORIA UNIVERSITY

DEGREE OF M.D.C.M.

Class I.—J. D. McNaughton and R. J. Niddrie, equal; T. B. Richardson.

Class II.—E. J. Boyes, A. G. Aldrich, J. F. Uren, E. P. Gordon, C. Sheppard, T. E. Kaiser, H. H. Gray.

Class III.—J. Lockridge, W. J. Blewett, W. Wright, G. Harrison, S. Douglass, E. F. Irwin, W. A. Baker, and J. J. Gee, equal; R. J. Crystal and A. T. Watt, equal; E. H. Adams, A. C. Aylesworth, E. T. Boyes, J. C. Bell, R. Rowan, E. V. Bray, J. H. Gimby, W. C. B. Murray, M. A., V. Armstrong.

Passed in jurisprudence and surgery—A. S. Bueglass.

Primary examination—O. McCullough, B.A., J. F. Pinkham.

HONOR LIST

Medicine—Class I.—McNaughton, Aldrich, E. J. Boye Niddrie, Sheppard, and Kaiser, equal.

Class II.—Adams, Gimby, Richardson.

Surgery—Class I.—Watt, Richardson, and Gray, equal; E. J. Boyes, Bell.

Class II.—Lockridge, Kaiser, Aldrich, Sheppard, and Niddrie, equal; Gee, McNaughton.

Midwifery—Class I.—Richardson, McNaughton and Uren equal; Lockridge, Niddrie and Blewett equal.

Class II.—Kaiser.

Surgical Anatomy—Class I.—E. J. Boyes, Sheppard.

Class II.—Baker, Watt.

Medical Jurisprudence—Class I.—Aldrich, Gordon, Niddrie, Uren.

Class II.—E. J. Boyes, McNaughton, Richardson, Harrison and Gray, equal; Chrystal.

WESTERN UNIVERSITY, LONDON.

First year.—W. S. McDonald, J. J. Wilson, G. R. Pogue, P. B. Wood, H. Sauderson, with honours. J. W. Nixon, J. McIntosh, F. Guillemont, F. Hoag, B. Lees, passed.

Second year.—H. F. McDonald, T. J. Gowan, W. H. McEwen, T. J. McBlain, R. W. Shaw, with honours. J. Parker, O. H. Patrick, J. MacGregor, G. H. Cook, R. M. Gubbins, J. Halliday, W. T. Banting, passed.

The following failed only in practical chemistry:—A. T. Hughes, A. Fraleigh, J. Hanson, W. H. Woods, J. McGinnis, S. Gibson.

Third year.—J. B. Kennedy, R. Ferguson, D. G. McNeil, T. P. McLaughlin, F. McCrimmon, with honours. M. Sharpe, J. W. Leninger, W. O. Murray, L. N. Ardiel, H. Wilson, passed.

Fourth year.—A. N. Hayes, E. M. Copeland, A. T. Hobbs, D. K. Stenten, D. Smith, E. Macklin, G. Gibson, R. Ferguson, with honours. J. A. McEwen, F. Gust, J. H. Shoebottom, S. E. Hooper, W. Baker, passed.

The first year scholarship was won by W. S. McDonald; second year scholarship, H. F. McDonald; third year scholarship (one year's residence in hospital), J. P. Kennedy.

Silver medal, fourth year, E. M. Copeland; gold medal, A. N. Hayes.

Miscellaneous.

A. PAGE, M.D., Rushmore, O., says: I have prescribed Aletris Cordial (Rio) in preference to all other similar preparations for a period of two years with no failure in a single instance. I also spoke of its merits in our last meeting of the Northwestern Ohio Medical Association, in a paper which I read before that body. I treated a case of a young lady of twenty-three, who had been troubled with excessive menstruation for five years, amounting almost to a hemorrhage at each period, and lasting ten days. Prescribed Aletris Cordial to be taken in drachm doses four times a day, commencing five days before each period; the first bottle reduced the discharge perceptibly and shortened the duration from ten to six days; ordered it to be taken during the interim of the next period, and the result was almost magical, the second period being reduced to four days, which was normal, and the discharge the same. The patient has now been eight months without any treatment, and she, as also myself, considers the case permanently cured.

ONTARIO

Medical Association

NINTH

Annual Meeting

June 11th and 12th, 1890.

The Tenth Annual Meeting of the Ontario Medical Association will be held in the City of Toronto on Wednesday and Thursday, the 11th and 12th of June.

Return tickets, at **One Fare and One-Third**, valid for seven days, will be issued to all properly qualified members of the profession. Physicians desirous of reading papers or presenting cases, before this meeting, are requested to notify the Secretary of the subjects of such papers or cases on or before the 1st of May.

Copies of the new By-laws and Code of Ethics may be obtained from the Secretary on application.

J. A. TEMPLE, *President*, Toronto.

D. J. GIBB-WISHART, *Secretary*, 36 Carlton St., Toronto

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MEDICAL COLLEGE

Chicago, - Illinois

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THE

CANADIAN PRACTITIONER

FORMERLY THE CANADIAN JOURNAL OF MEDICAL SCIENCE

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, [illegible]

TORONTO, MAY 16, 1890.

Original Communications.

HÆMATOCELE.

BY L. SPENCE, M.D., TORONTO.

F. S., æt. 24, servant, fair complexion, good physique. Had pelvic peritonitis six years ago in England; was in bed three months at that time.

History of present trouble: Was taken with severe pelvic and abdominal pains Dec. 29, 1889, while hanging clothes on the line in the yard. She complained of intense pain over the bowels and in the back. She continued moving about and doing some work, notwithstanding her severe pain, till January 3rd, when I first saw her.

Her face was pale, anxious, and pinched; the tone of her voice was an indication of intense suffering. She stood bent over to relieve the abdominal pain, which, she said, was much easier in that position. Pulse was feeble, quick, and very weak; temperature normal. She became unwell on the 28th, she said, and thought she caught cold hanging out clothes on the 29th. Found great tenderness over the lower part of the abdomen, being most tender over the left inguinal region. A hard swelling, having about the circumference of a cricket ball, is also found here. Swelling is hard and resisting, and feels like inflammatory induration. Percussion gives a dull note on the left side to the upper margin of the tumor, but gives a bowel sound on the right side.

On vaginal examination, find a dilated os, soft, and pointing to the pubes. A hard, resisting swelling filling Douglas' cul de sac and extending behind, laterally, and as far as one can feel, in front also of the uterus, and indistinguishable from the body of the uterus, the hardness of which is in marked contrast with the softness of the dilated os.

Vomiting is very severe and persistent.

Treatment.—Ordered absolute rest and gave anodynes to relieve the pain. Also ordered saline purgative tonic, giving ℥i. mag. sulph. every four hours till bowels move.

4th.—Patient no better. There is great tenesmus of uterus and bowels, and dysuria. The abdominal pain is paroxysmal; vomiting continues. The bowels continue obstinately constipated, though there is a constant feeling as if all would be well if they would move. Urine has to be drawn off. This condition of affairs continues till the 7th, when a decidua is expelled, but no fœtus was seen. My patient, who up to this time was supposed to be single, produced a certificate of marriage, stating that she was unwell for the last time about six weeks ago. There is considerable hemorrhage now, though there has been some all along.

The pallor and weakness and vomiting continue, and the tumor seems to become larger, extending across to the right side and filling the peritoneal cavity to within about two inches of the umbilicus. It is with great difficulty that the catheter is passed into the bladder, so great is the mechanical pressure against its neck. The

bowels still continue constipated to the 10th. Dr. Cameron saw her in consultation on this date. Does not think operation advisable at present. Continue the sulphates, and also gave pulv. glycyrrhizæ co., ʒi., every three hours till bowels move.

Patient keeps about the same, with slight improvement, till the 22nd, when she becomes suddenly worse. She has taken 2 oz. of pulv. glycyrrhizæ co., and about 6 oz. of mag. sulph., without any effect on the bowels. On the 23rd the symptoms are very grave. She is more blanched and faint, and more deathlike; the abdomen is more distended, the mass being harder and more tender, and extends almost as high as the umbilicus on the left side, but extends higher towards the left kidney than in the median line. This mass covers the entire abdomen below the umbilicus. The hard mass in Douglas' cul de sac touches the vulva and almost protrudes. The patient continues vomiting, and the pain and distress are intense.

Dr. Cameron again sees the patient in consultation on the 25th. He advises an operation, as he considers the case as probably an extra uterine pregnancy. He also advises grain doses of iodoform, ac. salicyl, and ergotine, in capsules, three times a day (this treatment is continued till recovery), till the 27th. If not improving then, advises to call Dr. U. Ogden.

On the 27th Dr. Ogden recommends an operation, to take place in two or three days if considerable improvement has not taken place. His reasons for advising an operation are, 1st, the case is probably abdominal pregnancy; 2nd, on account of the large size of the tumor, suppuration would be apt to occur and the patient most likely die; 3rd, recovery would be facilitated and a prolonged sickness cut short. Bowels have not moved yet. All agree that the prognosis is very grave in any case. On Dr. Ogden's advice mag. sulph. in ʒi. doses every hour in cold water is given. This is continued for 30 hours, and still the bowels do not move. On 29th they move a little. The other symptoms continue as bad as ever, only the general appearance is better. On the 30th I telephoned Drs. Cameron and Ogden to come, with a view to operating.

On telephoning to Dr. Ogden I reported that I thought there was a slight improvement. He answered: "Let her improve, then." She kept about the same for a few days, after which there were more visible signs of improvement, vomiting gradually ceasing, appetite improving, and the bowels moving every day and the tumor becoming smaller.

On February 5th she had a slight recurrence of the hemorrhage. There was considerable discharge of blood from the vagina. There was increased vomiting, increased pain, and great distress. She was also very feverish for her (her temperature in no part of her disease exceeded, up to this date, 101½°). She had at this time all the ordinary symptoms of la grippe. This condition culminated on the 9th in a short fit, in which, while she retained consciousness, there was trembling of the voluntary muscles, oscillation of the eyeballs, nictitation, squint from paralysis of the external rectus, and dilation of the pupils. Could protude the tongue, swallow. Reflex is normal, urination very free, pulse 110—130 in minute, temp. 102°. This occurred about 10.30 p.m., and lasted about an hour. From this date her progress was rapid. She sat up in bed on 16th February. She began to pass urine without the catheter on the 2nd of February. Vomiting continued in the mornings till 28th February,

The only remark I have to make on this case is: I believe this almost hopeless case of hæmatocele, and one the cause of which could not be determined, but which was taken to be an ovum escaped into the peritoneal cavity, did infinitely better by the expectant treatment than she could have done by the operative.

Selections.

SACCHARIN.—It seems that our Government like that of France, does not regard saccharin in a very favorable light, as not only this substance itself, but compounds containing as little as one-half of one per cent. are chargeable with a rate of ten dollars per pound. This, if carried into effect, will forbid the use of the new sweetener as a dietary substance, and this is probably a wise restriction.—*Canadian Pharmaceut. Journal.*

DEATH FROM SEPTICÆMIA AFTER WOUND OF THE HEART.—Dr. R. M. Hall, of Baltimore, reports in the *Medical Bulletin* for March a case

of a colored woman, twenty-one years of age, who received a penetrating wound of the chest. The injury was done with the blade of a pocket knife, which passed completely through the right ventricle of the heart, a little to the left of the septum. Two days after the injury the patient had a miscarriage, and, although antiseptic injections were used, she died four days later, or six days and fifteen hours after receipt of the wound. There was only a small amount of clotted blood in the pericardium after death, and the wound in the heart was closed by a plug of fibrin. Had not the abortion occurred the patient would probably have recovered, and the gravity of the wound not have been discovered. —*Kansas City Med. Index.*

DEATH FOLLOWING THE INJECTION OF COCAINE INTO THE URETHA.—Before performing an internal urethrotomy, the author, M. Simes, injected one gramme of a five per cent. cocaine solution into the urethra. The patient, aged 29 years, was, independent of his local trouble, in good health. Immediately following the injection, contraction of the muscles of the face took place, then dilatation of the pupils, arrest of respiration, and epileptiform convulsions. The convulsive phonomena increased in severity, the respiratory movements became more and more feeble, the cyanosis intense, and at the end of twenty minutes the patient was dead. At the autopsy the lungs were much congested, but normal, the left ventricle contracted. Post mortem clots were found on the right heart.—*Gaz. degli ospitali.—Lyon Médical.*

THE MICRO-ORGANISMS IN CHEESE. — Professor Adametz, of Larnthall, in Switzerland, has isolated nineteen varieties of microbes in a single variety of cheese in the fresh condition. In each gramme of this product he counted from 90,000 to 140,000 bacteria, which in seventy days had multiplied to 800,000. In the soft varieties the number is still greater: 1,200,000 in a gramme of cheese thirty-four days old, and 2,000,000 in another forty-five days old. These figures refer to the interior; in the rind, three to five millions of organisms were counted per gramme. —*Lyon Medical, March 16, 1890.*

G.A.F.

SWELLING OF THERAPEUTIC ORIGIN SUBCUTANEOUS INJECTIONS OF METALLIC MERCURY.—At the Society of the Medical Sciences of Lyons, M. Augagneur exhibited fragments of a tumor of therapeutic origin. A patient, suffering from a mild attack of syphilis, was given two subcutaneous injections of metallic mercury in the buttock, one containing six grammes, the other three. The attack progressed, producing some manifestations in the mouth. The interesting feature of the case was, that the patient suffered very frequently from attacks of ulcerative stomatitis, occurring at short intervals, particularly after a blow on the buttock. A month ago, after a fall on the buttock, he again had a serious attack of stomatitis, and was admitted into l'Antiquaille. Suspecting that the metallic mercury had not been absorbed, M. Augagneur decided to remove the swelling which had formed about the situation of the mercurial injection; he did, in fact, express metallic mercury from the Gluteus maximus after removing the greater part of the muscle. This case demonstrates the uncertainty and danger of this treatment. The mercury is probably absorbed as a chloride.—*Lyon Medical, March 30, 1890.*

G.A.F.

TREATMENT OF SOFT CHANCRES BY THE SUB-BENZOATE OF BISMUTH. — Iodoform is perhaps the best local application for the treatment of chancroid or soft chancres, but its characteristic odor renders its use difficult in city practice, unless the patient keeps to his room. We are glad, therefore, to welcome the appearance of a new remedy, highly extolled by Mr. Finger, who has substituted the sub-benzoate of bismuth for iodoform. The chancroid is powdered with the sub-benzoate, covered with cotton wool, and a small dressing applied. This operation may be repeated once or twice a day. When the first application is made the patient feels a slight burning sensation, easily borne. The sub-benzoate causes no local irritation; in three or four days, more rarely in five or six, the chancroid assumes the appearance of a healthy ulcer. An ointment of the strength of two per cent. of carbolic acid is all that will be necessary to complete the cure. The sub-benzoate of bismuth is obtained by heating the sub-nitrate of bismuth in presence of nitric acid and benzoate

of soda. It appears as a fine, light, white powder, having a slight pungent odor.—*Bulletin Medical, Feb. 19th — Lyon Medical, March 2nd, 1890.* G.A.F.

EXCEPTION TO THE LAW OF BANNES (otherwise Law of Colles).—By Dr. L. Merz. It is generally admitted by syphilographers that a nursing mother is never infected by her syphilitic child. This precious immunity which preserves from a terrible contagion the person most directly exposed, and which allows these unfortunate little beings, objects of loathing and fear for all who approach them, to enjoy the inestimable advantage of being nursed and cared for by their mothers, is known in science under the name of Colles' Law (or more correctly, according to Professor A. Fournier, as the Law of Bannes). It is looked on as being absolutely established, and Dr. Merz, in the Bibliography of Infantile Syphilis, cites but one exception to this law, published by Zingales in 1882. The Professor of the Medical School of Algiers publishes another exception. A man 34 years of age contracted, when 29 years old, a syphilis of moderate intensity, which, three years later, again revealed its presence by the appearance of a fresh crop of mucous patches in the mouth. His wife became pregnant six or eight months after this fresh attack, which occurred two months after her marriage. Pregnancy was normal. Confinement took place at term, on the 1st of October, the baby, a boy, being apparently sound and healthy. In about fifteen days mucous patches appeared on the lips, tongue, and cheeks of the child, and a discrete pemphigus on his legs and arms. The mother was submitted to the mixed treatment, and the child was free from eruption in ten days. One month later, painful fissures and an indurated chancre appeared on the left breast of the mother, with an indolent enlargement of glands in the axilla. The chancre disappeared in fifteen days, and was followed thirty days later by a magnificent roseola, with falling of hair and mucous patches on the inner surface of the right cheek. The anti-syphilitic treatment on which the mother had been placed when the child first showed signs of the disease had been rigorously carried out. The mother did not exhibit any other manifestations; the milk remained abundant, and nursing was not interfered with. Both are, or appear to be, cured at the moment of writing. In addition, M. Merz quotes a case in which the law of Colles was confirmed. M. X., 37 years of age, two years married, contracted syphilis when 26 years old; manifestations until 32nd year, moderate intensity. Mrs. X., seven months after her marriage aborted at three months; a year later she was prematurely confined about the middle of the seventh month of a puny, sickly child. The mother nursed him for three months, then seeing that the child was covered, particularly on the face, with an eruption of papules and crusts, which she attributed to her bad milk (she had always been anæmic), she engaged a wet nurse. Six weeks later, the unfortunate nurse, who had been carefully examined and found healthy before being engaged by Mrs. X., developed an indurated chancre on the left breast, followed by a roseola and by alopecia. The mother had no syphilitic manifestations whatever.—*Bull. Med. de l'Algerier.—Arch. de Tocologie. Lyon Medical, Feb., 1890.* G.A.F.

THE THERAPEUTIC USES OF IODOL.—Elsewhere is published a paper by Dr. Cerna on the use of iodol, in which he details instances where the drug, when used internally or externally, did great good in diseases widely separated from one another. It has always seemed to us that the profession was too much inclined to pass this drug by as one which could only be considered a substitute for iodoform, and an almost useless addition to internal medicine. Some years ago Cervesato published the results obtained by him from its use in the treatment of scrofula and respiratory affections of a chronic type, and in the treatment of tertiary syphilis. He claimed that it does not readily produce iodism, even when used in the dose of 15 to 45 grains a day, and that the stomach is not disturbed by its employment. Still further back Stembo wrote a paper asserting its value in diphtheria, when it is applied locally to the affected area, using it alone, or in the form of a solution made up as follows: ℞.—Iodoli, ℈ss; alcohol, f℥ss; glycerini, f℥iiiss.—M. S. To be painted over the part.

The number of cases treated by him was

seven, and every one recovered in from four to six days. The advantages he found consisted in its harmlessness, its lack of odor and taste, the painlessness of its application, as well as the avoidance of untoward after-effects.

In cases where a discharge from the middle ear needs a dry antiseptic powder, iodol may be used in place of iodoform with success, and without the disagreeable smell of the latter drug. Under these circumstances Purjesz has found it useful in both the acute and chronic forms of this troublesome malady, as it always stopped the discharge in a few days in the acute attacks in his hands. When employed in the ear it may be applied once or twice a day, care being taken that it does not produce too much irritation in the part affected.—*Med. News.*

ELEVEN CASES OF INTUBATION IN YOUNG CHILDREN.—The details of eleven cases are given, O'Dwyer's instruments being used, and tracheotomy being resorted to in those cases in which it was thought that an open wound would give better relief. This was the case in three patients—large quantities of mucus obstructing the tube, and giving rise to constant and ineffectual cough. The author thinks that the tracheotomy tube gives a better chance than intubation in feeble children, when there is broncho pneumonia present with the diphtheria. No serious difficulty in feeding was experienced, fluid food being given in all cases. After the tube had been inserted, the string was left attached in all cases except one, the free end being secured to the left temple by strapping, and not withdrawn, as usually recommended. The hands were fastened to the side of the bed with a flannel bandage, sufficiently long to give the child freedom to play with its toys, and yet not reach the mouth.

The advantage of having the string was found in one case where the tube slipped below the vocal cords, but was readily withdrawn. The author's experience with O'Dwyer's tubes is, that should there be any membrane or collection of mucus exciting cough in a fairly vigorous child, the tube acts as a moderately tight wad, offering just sufficient resistance, that an energetic cough causes its immediate expulsion, and with it, any mucus or loose membrane that may lie below it. Complete relief, which is of very variable duration, is due to the temporary displacement of the œdema of the cords, from the pressure exerted by the tube.

A tracheotomy tube, on the other hand, cannot, when tied in, be expelled, and the removal of the inner tube is frequently quite insufficient to enable the child to rid itself of the cause of the obstruction, and a skilled nurse or medical officer should be within call. The amount of practice required to intubate, fairly rapidly, cannot be compared with that required for tracheotomy. Two assistants are essential in intubation, one to hold the child, and another to steady the head and control the gag. Too much stress cannot be put on the importance of keeping the patient's body and head held fair and square before the operator. The results obtained by the author in the eleven cases mentioned, and in five others subsequently intubated, were, seven recoveries and nine deaths. The average age of the fatal cases was under two years, and of those cases which recovered, five years.—*Jour. of Laryngology.*

TREATMENT OF SYCOSIS.—For purposes of convenience, I will divide the treatment in two stages, viz., the curative, and the prophylactic. When the curative treatment is undertaken, it has been my practice, lately, to epilate as thoroughly as possible. Where a large area is involved this cannot be done at once, but will have to be performed at successive daily sittings. Care must be taken to epilate thoroughly, and the vibrissæ, in the nostrils, should not be overlooked. Any pustules or small abscesses should be opened and their contents evacuated. When hairs are extracted the pus contained in the follicle should be evacuated, as much as is possible. I pay no attention to the tubercular infiltrations, as they disappear in a short time under the medication employed. As soon as the last hair of that sitting has been extracted, apply campho-phenique pure, and order the patient to make a similar application at night. This simple treatment constitutes the curative portion.

After a variable time it will be observed that pustules are a very unusual lesion, and it is then the proper time to institute the prophylactic treatment. This is absolutely essential for two reasons. In the first place, a few micro-organ-

isms may be deeply lodged in some crypt; and, if the patient is permitted to neglect all treatment, they will constitute a focus from which a general infection will spread, and a consequent relapse will occur. In the second place, the omission of any treatment exposes the patient to the dangers of a fresh infection from without. Having had sycosis once shows a susceptibility to the disease, which is increased by the fact of having contracted it. For these reasons a patient, who is apparently cured, should be subjected to a further course of treatment The prophylactic course is very simple. I order the patient to shave every morning. He is directed to make his lather with a bichloride of mercury soap, using a 1 in 1000 bichloride solution in water. He is also cautioned to render aseptic his razor, shaving brush, etc., by some simple means. After having shaved, a bichloride solution is ordered to be applied, the strength varying from 1 in 500 to 1 in 1000, according to the tenderness of the skin. At night the same application is made, or sometimes varied by ordering lanolin to be rubbed in.

I have had a happy experience by the use of this method. The curative treatment has accomplished its purpose in from two weeks to three months. The duration of the disease when I saw it varied from three weeks to seven years, in different individuals. In long standing cases the tubercular masses disappeared under the influence of the campho-phenique, which besides being antiseptic, has marked reducing powers. The slight dermatitis which exists at the termination of the curative treatment, disappears spontaneously under the prophylactic treatment.

The duration of this latter treatment is indefinite. I have some patients who have pursued it for about two years. They have never experienced any relapses, and are so well pleased with the results that they prefer continuing it to running the risk of contracting the disease once more.—*Ohmann Dumesnil in St. Louis Med. and Surg. Jour.*

PHYSIOLOGICAL ACTION OF ANTIPYRIN. In some experiments upon the action of the drug upon the brain, where the crura cerebri were cut, the temperature rose rapidly in a most extraordinary manner. Thus, in a dog in which the cut passed through the posterior portion of the crura, the temperature was found to be 110° Fahrenheit in the rectum, and 112 were recorded in the abdominal cavity some time after death. Usually, however, a temperature of 105°-106° was noted under such circumstances.

This fact is of interest, especially in a consideration of the well-known antipyretic action of the drug.

In the normal animal, antipyrin does not lower the bodily temperature, even if given in toxic doses, while this certainly does occur, to a marked extent, in the presence of fever. In the above case high fever was observed, and antipyrin had been administered in quite a large dose; why, then, did it not affect the temperature?

Certainly a probable action of the drug upon the thermal centres directly offers itself as a ready answer to the question; the thermal centres being thrown out of action in the above cases, it could no longer exert its influence upon the tissues through the thermal nerves.

We certainly have reason to believe that heat-production or heat-regulation, or both, are under the control of a cerebral centre or centres.

In all cases of fever, in which the body temperature is lowered by the drug, the following is the probable action: the abnormal constituents of the blood, whether they be products formed by the action of bacteria, or otherwise, or reflex causes, having their origin in an abnormal condition of the nerves leading to the thermal centres, act upon the latter, stimulating them if they are heat-producing, paralyzing, or, at least, lessening their irritability if heat-regulating, or both, if both exist. Antipyrin, on the other hand, if administered under such circumstances and effecting a reduction in the temperature, must act in exactly in an opposite manner to result in a lowering of the temperature.

At the same time nitrogenous waste is decreased (as Samadowsky showed) by antipyrin, in the normal as well as in the feverish animal, but that this decrease of waste is not due to an action of the drug upon the thermal centres, but upon the tissues themselves, is apparent from the fact that the temperature of the normal animal is not affected by it, however large the

dose might be. This, then, explains the reason why antipyrin is such a powerful antipyretic, since it acts on both the thermal centres and the tissues.

The styptic action of the drug is most marked, and has been ascribed by some to an action of the drug upon the vasomotor system. While this may be the case, it is certainly only a partial cause, since the antipyrin influences the clotting power of the drug in a most remarkable manner: thus in one case, when 50 cc. of blood were allowed to flow into an aqueous solution of antipyrin (gr. x in 10 cc.), a clot had formed one minute later already of such strength that the entire beaker could almost be inverted. *Simon and Hoch, in Johns Hopkins Hospital Bulletin.*

THE PHYSIOLOGICAL AND THERAPEUTICAL PROPERTIES OF EXALGINE.—Exalgine is a compound occurring in colourless acicular crystals, readily and completely soluble in water, to which a small proportion of spirit has been added soluble also in hot water, and to a less extent in cold. Drs. Dujardin-Beaumetz and Bardet ascertained that in medicinal doses the effect of the drug was, under certain circumstances, to abolish the sensation of pain without affecting tactile sensibility. If pushed, it brought about a marked and persistent fall in the temperature, but only in doses larger than are necessary to produce the maximum of the analgesic effects. Speaking generally, its effects resemble those of antipyrin, but exalgine was found to affect sensibility to pain more particularly, the antithermic effects being quite secondary in importance. Moreover, the effects of exalgine were obtainable with doses far less than those of antipyrin. It is eliminated in the urine, the quantity of which it lessens, and this effect is particularly well marked in diabetic polyuria, in which both the amount of the urine and of the sugar are diminished. Given, however, in medicinal doses, even when repeated, no gastro-intestinal irritation, rash, or cyanosis, were noticed by their observers, though in one instance, probably due to some idiosyncrasy on the part of the patient, a slight ephemeral erythema followed its administration. The usual dose is from two to five grains, cautiously increased to eight grains if necessary. It is not desirable to exceed from six to twelve grains in twenty-four hours. As exalgine is essentially an analgesic and not an antipyretic, its use is contra-indicated when the temperature is above the normal. I have found it to be best administered in a little whisky or brandy and water, but where for any reason the addition of spirits is not desired, the drug can be given in wafers or gelatine capsules. Though almost insoluble in cold water, exalgine dissolves readily enough in the stomach, owing to the acidity of the gastric juice. As has been experimentally proved, it acts very promptly, and the effect has often been to secure more than a passing relief from pain. In one or two cases in which the dose was pushed to fifteen grains, the result was an appearance of intoxication, with slight noises in the ears lasting for some minutes. The drug is usually given morning and evening, just after getting up, and just prior to going to bed, but as it has no direct effect on the stomach there is no objection to its being given at any time during the day, even before a meal, provided only the smaller doses are prescribed. It has been remarked that the analgesic effects of exalgine have been particularly satisfactory in obstinate cases, which antipyrin and the salicylates had failed to relieve. The converse may also be true, but I have, so far, not had an opportunity of making comparative observations in this respect. The affections in which exalgine has produced the best results are those of which neuralgic pains are the most troublesome feature. In neuralgia proper, both *a frigore* and congestive, the relief is immediate, and often lasting. Moreover, neuralgic pains associated with affections of the female reproductive organs, have appeared singularly amenable to its sedative influence. Neuralgia of the dental nerves, tic douloureux, and the like, belong to the category of cases in which exalgine is almost always a specific, at least that is what the experience of the cases thus far treated by means of the drug would lead one to infer. Fraser, of Edinburgh, found small doses of exalgine (½ to 2 grains) very efficacious in the treatment of a large number of cases of sciatica, herpetic neuralgia, cardiac angina, pleurodynia, rheumatic synovitis, gastralgia, etc., and in several cases of locomotor ataxy the "lightning" pains were promptly overcome. The only precautions to

be observed in prescribing exalgine are:—1. To commence with doses not exceeding from two to five grains. 2. Not to give more than from ten to twelve grains in twenty-four hours. 3. To consider the febrile condition as a formal contra indication. With these precautions, exalgine may be ordered with confidence and without hesitation.—*A. S. Gubb, in Medical Press and Circular, Feb. 26, 1890.*

EXPERIMENTAL RESEARCHES UPON THE DIPHTHERIA BACILLUS.—Klebs in 1883 published experiments, in which he found two different micro-organisms in diphtheritic products. Lœffler found Klebs' bacillus in the deeper layers of the false membrane, and obtained pure cultures of it, demonstrating experimentally its eminently pathogenic properties. The bacillus lived and died *in situ*, being never found in the blood, or viscera, but acted upon the constitution by producing a poison. The streptococci, which have been found in false membranes, predominate, especially in post-scarlatinal diphtheria, and to them is due the necrobiosis of the tonsil occurring in this form of diphtheria. Contrary to the diphtheria bacillus, they are found in internal organs (heart, liver, spleen, and kidneys). Their pure cultures never produced false membranes in animals, and they are therefore not pathogenic of diphtheria. The inoculation of Lœffler's bacillus upon scarified surfaces always produced false membrane identical with human diphtheria, their inoculation in cellular tissue produced vascular lesions, œdemas, hæmorrhages, etc. Lœffler, however, remarked that the bacillus had not been isolated in some typical cases of diphtheria, it had further been found in the saliva of a healthy child, and animals which survived the inoculations did not present paralytic phenomena. Later on, Lœffler demonstrated a pseudo-diphtheritic bacillus which had no pathogenic action upon animals.

In 1888, Roux and Yersin verified Lœffler's researches, with the important addition that they were able to produce experimentally in pigeons and rabbits late paralyses, which resembled post-diphtheritic paralysis in the human subject, and they obtained solutions from their cultures which acted as chemical poisons retaining pathogenic action. In 1889, continuing their researches at the Pasteur Institute, they succeeded in producing the same paralyses in a dog, and also toxic albuminuria. In 1889, d'Espine made experiments to show the action of various antiseptics upon Lœffler's bacillus, which he demonstrated to be the specific bacillus of diphtheria. Kolisko and Paltauf also found the bacillus in fifty cases of diphtheria, and never in the pseudo membranous sore throat of scarlatina and measles. Ortmann also isolated the bacillus in fifteen out of sixteen cases from diptheritic false membranes, and Spronck, of Utrecht, repeated the experiments of Roux and Yersin, producing late paralyses and albuminuria from the injection of filtered cultures in the rabbit and pigeon. He also, with Wintgens and Dœts, isolated the bacillus from the false membranes, in seven cases of diphtheria. Zarinko, from twenty cases of epidemic diphtheria, isolated and cultivated Lœffler's bacillus in eighteen, which in eleven cases of catarrhal origin (common catarrh, scarlatina, measles) the bacillus never occurred. In eighteen cases where examination of the apparently normal pharynx was performed, the bacteriological results were negative.

D'Espine and de Marignac isolated Lœffler's bacillus in eleven cases of diphtheria. These results were negative in four cases, of which only two exhibited the clinical aspects of diphtheria; in one of the others, of scarlatinal origin, the streptococcus was found also in the last case of "diphtheria" of the wound after resection of a knee.

The normal diphtheria bacillus resembles the tubercle bacillus in length, and its form varies much with the age of the cultures, the medium of cultivation, and method of coloration. The authors give the following method for detection of the bacillus in false membranes: A small thin piece is stretched over a cover glass, dried over a flame, and rapidly coloured with gentian blue. The bacilli appear under the form of slightly curved sausage-shaped organisms, strongly coloured, and having nearly always the same length. They are most numerous in recent membranes. Gramm's method of coloration is serviceable to detect saprophytic bacilli from diphtheritic in false membranes, the former being entirely decolorised, the latter not.

The authors discuss the action of light and

drying, of oxygen and its deprivation, and of heat and antiseptic substances upon the bacillus of diphtheria. With regard to the latter they find that boracic acid, chlorate of potash, alum, and lime water, have little destructive influence upon the bacilli, while salicylic acid $\frac{1}{1000}$, and even $\frac{1}{2000}$, citric acid and citron juice are very active in arresting the development of Lœffler's bacillus. The survivance of the bacillus in the dry state can be prevented in sick rooms by good aeration, disinfection of walls, floors, and clothing, and as milk is a medium for extraordinary propagation of the bacillus, its use should be interdicted when coming from a house in which diphtheria has occurred.

Irrigations of salicylic acid, one to two per cent., repeated every hour or two hours, is the best local treatment.—*Journal of Laryngology.*

CASE OF TRANSFUSION.—On the night of October 27 I was sent for to see a young girl who had been confined by a midwife 13 days before of her second illegitimate child. She had fainted twice during the evening and this had induced them to send for a doctor.

On my arrival, the patient was too weak to give an account of herself, but enquiry elicted that she had fainted immediately after the confinement, and again on the seventh day, as well as twice previous to my being sent for, and that bleeding had been going on continuously since the delivery. This was not considered unusual or important, and with the view of "strengthening her" she had been allowed up a few hours the last two days. It was while sitting in a chair that the fainting had occurred this evening. The midwife who confined her was present and said she had only seen her twice since delivery, which was natural, except for the faint afterwards and a rather too free flow of blood. The after-birth, she said, came away all right.

The patient was very restless, the pulse a mere thread, 156 to the minute, temperature 103, respirations sighing and voice weak. On vaginal examination I found a profuse discharge of watery blood. In the vagina was what seemed like a bag of coarse sand, but which I soon found to be the placenta, which had undergone calcareous degeneration and was firmly attached to the almost completely inverted uterus. Owing to the relaxed condition of the parts reduction was easy, but some little difficulty was experienced in peeling off the placenta. The uterus was drenched with hot carbolised water and then with perchloride of iron and water, 1 in 20. By this time the pulse was uncountable and the tendency to faint marked. I gave half-dram of ether hypodermically, and finding this had no effect determined to try transfusion as a last resource. The apparatus used was a pint douche can with a rubber tube attached, into the other end of which I inserted a canula of my aspirator. A teaspoonful of salt was dissolved in a pint of water at about blood heat, and with the help of Dr. A. T. O'Reilly I proceeded to open the median basilic vein, which showed more prominently than the median cephalic. A string having been tied around the upper arm, the vein was exposed by a transverse skin incision, there being so little subcutaneous tissue that great care was necessary to avoid an accidental wound. The vein was then lifted up by a director passed beneath it and a small longitudinal opening made to admit the canula. The blood which flowed out was thin and watery, in fact merely serum. While the saline solution was flowing from the canula this was inserted upwards into the vein, and the can raised only slightly above the level of the patient so that the fluid should not enter at too great a pressure. When about one-third of the pint had entered a distinct improvement took place, the pulse became fairly regular, 144 to the minute, and the patient said "I am better now." Unfortunately I continued to allow the solution to flow, and in a few seconds the pulse failed again, the respirations became laboured, and the patient much distressed. I immediately ceased the transfusion, but the symptoms grew worse, there were the terrible precordial anxiety, pains and oppression in the chest, gasping for breath, and other symptoms characteristic of capillary thrombosis. The patient was evidently past all aid, and died just three hours after I entered the house. The transfusion in this case had a distinct but very temporary good effect. Perhaps if I had ceased directly the improvement occurred the result might have been different, but I do not think so, as owing to the septicæmia which was undoubtedly present, we had to deal not only with a dangerously diminished quantity, but also with a poisoned

quality of blood. In the exhaustive lectures on transfusion by Dr. William Hunter, delivered before the Royal College of Surgeons and published in the *British Medical Journal* for April last, it is clearly shown that the distressing disturbances, sometimes seen to follow transfusion, are due to capillary thrombosis, and not to any over-filling of the system with blood or too rapid injection, which are usually considered the producing causes. Why this capillary thrombosis should occur in one case or experiment and not in another is as yet not clearly understood, but everything points to the condition of the recipient's blood at the time of operation as the main factor. It is much more likely to follow the injection of blood than of saline solution, Defibrinated blood is more dangerous than ordinary blood because the proportion of the white corpuscles is much higher, and the disintegration of these and the blood plasma seems to be the immediate cause of thrombosis. Dr. Hunter lays stress on the fact that the chief value of transfusion is physical, restoring a volume of fluid to the vascular system sufficient to enable the circulation to be carried on. Blood possesses, in addition, a physiological value in its greater power of stimulating the vasomotor centres, but this advantage is more than counterbalanced by the greater difficulty and danger attending its use. Great care should be taken to see that the temperature of the solution should not be above that of the body.—*R. Worrall in Austral. Med. Gaz.*

A PHENOMENAL CASE OF GASTRIC ULCER.—F. T., æt. 34, Swede laborer, good family history, enjoyed very good health until Nov. 15; from that date until the 25th he was attended by Dr. A., who diagnosed typhoid fever. For a few days he had had general malaise, then repeated chills and attacks of vomiting; a week later severe abdominal pain and tenderness, with some tympanitis. The least pressure upon the abdomen caused pain, and at the end of the second week a cough came on which caused great pain in the epigastrium.

On the 25th he fell under Dr. B's care, who diagnosed typhoid fever with a complicating right pneumonia. For a few days, until the pneumonia resolved, the fever was pretty steady and high, 104 to 104½. There was rusty sputum, cough, and pain in side. Dec. 14th the patient was so far convalescent that the physician ceased to call. Patient was taking nourishment and gaining strength, but not out of bed, and there was no enlargement in the left side. Dec. 19th the doctor was again called, and found what he thought was an enlarged spleen. The tumor then filled the left side from the fifth rib to near the iliac crest, and across to near the mesial line, even beyond the middle line at a point above the umbilicus. The tumor, hard and non-fluctuating, projected very prominently in the left hypochondrium. It must have arisen very quickly, as the doctor was absent but four days, and the friends called him as soon as they noticed it. From Dec. 19 to Jan. 4 a pretty steady temperature of from 100 to 101, bowels constipated, and a good deal of vomiting.

Jan. 4 the patient was taken to the hospital. A prominent tumor occupied the left side, extending from the fifth rib to near the iliac crest, felt hard, but gave indistinct fluctuation. When patient lay on his back there was flatness in the axillary line from the fourth rib downwards, and the respiratory murmur, bronchial in character, was distinctly heard over the dull area, while on the right side the flatness disappeared and was replaced by hyper-resonance to near the ninth rib; bronchophony. Over the right lung vocal fremitus, bronchial breathing and bronchophony.

Diagnosis.—Enlarged spleen, with abscess and left pleurisy with effusion. The tumor became more flat under the ribs, softer, and distinctly fluctuating. On Jan. 18 he was aspirated in the 8th interspace, axillary line. First came a quantity of apparently pure blood, followed by 24 oz. of most foul pus with a fæcal odor. The patient died the following night.

Autopsy.—Body moderately emaciated. A large pus cavity, with walls ¼ inch thick, was found to occupy the left side of the abdomen cavity. It was wholly infra-diaphragmatic, that organ being crowded upwards, and extending from the fourth rib to near the iliac crest. It was somewhat cone shaped, with the base directed upwards, and extended from a little past the mesial line, in the epigastric region, around to the left to near the spinal column, and still contained three quarts of dark, thin,

purulent, offensive matter. Stomach and splenic flexure of the colon lay behind the sac, being crowded downwards, so that the colon was behind and below the sac. It appeared to be between the greater omentum in front, and the stomach, pancreas, spleen, left kidney and splenic flexure behind, the spleen and left kidney being intimately embedded in the posterior wall of the sac. Pancreas healthy, spleen slightly small and rather hard, evidently the result of pressure. Liver and kidneys healthy. No evidences of enteric fever or other intestinal abnormalities. Heart remarkably small, contracted, and free from clots. A serous effusion into the left pleural cavity. Until the spleen was found and examined the sac was supposed to spring from that organ. Two fistulous passages, readily admitting the tip of the little finger, were found to connect the sac with the alimentary canal. Two funnel-shaped, round ulcers existed on the greater curvature of the stomach, one ¼ of an inch, the other 1½ inches from the pylorus. At the bottom of these ulcers perforations nearly a half inch in diameter opened directly into the abscess cavity. It was clearly a case of two round ulcers of the stomach, running a very rapid course, with perforation and encapsulation of effused gastric contents and exudates. The perforations were evidently primarily from the stomach and not the reverse, as the gastric ulcers were typical and funnel-shaped, with smaller perforations at the bottom.

It is certainly wonderful that gastric ulcer should run such an anomalous course, and it is not strange that the physicians were thrown off the right scent, by the strange course of the disease.

That a patient should be brought, in two months, from supposed health to death by such a series of unusual events, seems worthy of note.

It shows in connection with the case above referred to: (a) how rapidly destructive gastric ulcers may at times be; (b) how masked the symptoms occasionally are; the wonderful powers of the peritoneum, under some circumstances, to fence out offending matter.— *James H. Dunn, in Northwestern Lancet.*

SACCHARINE. Saccharine is said to be soluble in 330 parts of water, but it is found that for the commercial article sometimes 600 parts of water are necessary, and sometimes as much as 1200 parts. From the published analyses it is very evident that the substance, as placed on the market, is very far from pure, and, furthermore, that the methods of manufacture must vary, as there is no uniformity nor regularity in the impurities.

As to the physiological action of saccharine there is some divergence of opinion, which may be accounted for by the great variation in the composition of the commercial substance. Pure saccharine may exert a very disturbing influence upon digestion if used in sufficiently large amounts. A committee, looking into this question for the sake of public hygiene in France, reported that in the proportion of 1 or 2 to 1000 it hinders the fermentative action of saliva, and in amounts of 2 or 3 to 1000, it interferes with the gastric action on albuminoids. The action of the pancreas is also retarded. Hence, some maintain that its use should be altogether prohibited, and especially that it should not be used, as is so often recommended, by diabetic patients, for whom a good digestion is so essential. Others say that the amounts entering into use with foods are so small that no effect upon the digestion can be observed, even after prolonged use. It is not one of those substances stored up in the body and so acting cumulatively, but is passed off largely unchanged and mostly within twenty-four hours through the urine. Stevenson and Wooldridge maintain that it is harmless, even in comparatively large doses, and when the use is long continued. Dujardin-Beaumetz says that it yields good results with diabetic patients, and that it is a question whether one can continue taking it with impunity. Bruylants concludes from his experiments that in the amounts in which it is generally used it cannot be regarded as an antiseptic, and that it has no injurious action, unless there be a possible harmful effect after long continued use.

Animals show great repugnance to food sweetened with saccharine. Bees, wasps, dogs, and cats, all readily detect the presence of the saccharine, and refuse to touch it. Dogs refuse to lick hands that have been moistened by a solution of saccharine, and not even great hunger can drive cats to partake of their

ordinary food sweetened with the same solution.

In pharmacy its use must be restricted, as it cannot substitute sugar in coatings, nor in dilutions, nor do the directions for preparing the saccharine syrup seem satisfactory. It is reported as quite incapable of disguising the bitter taste of quinine, and similar bitter alkaloids. It is used in medicines for diabetic patients. In wine it is not only a sweetening, but a preserving agent. In fruit-acids, liquors, glucose syrup, and confectionery, it is unquestionably used. Grape-sugar is also sweetened by it up to the standard of cane-sugar, and then used to substitute the latter. Chocolate and cocoa are sweetened by it, instead of by sugar. There is at present but one factory, that near Magdeburg. The yield from this is something less than 30,000 pounds a year, and this corresponds to 15,000,000 pounds of cane sugar. But to produce this amount this one factory already consumes two-thirds of all the phosphorus made in Germany. Of course more phosphorus can be made, but the extension of this manufacture means a very widespread upheaval and changes among the other industries. For hygienic or financial reasons the various nations have begun to consider the importation of saccharine and its results.

As in many countries an important part of the revenues comes from the tax upon sugar, the question of the evasion of this tax by the use of glucose, sweetened with saccharine, becomes a serious matter. It is interesting, therefore, to note the position of the various governments towards this American invention.

Italy taxes saccharine at the rate of one thousand francs per hundred kilos. Finally, a a law has been proposed prohibiting the importation or manufacture of saccharine, or substances containing saccharine, permitting, however, a restricted importation for pharmaceutical purposes. The importation into Portugal, France, and Spain, is forbidden. Great Britain has prohibited the use of saccharine in beer brewing, mainly for financial reasons. Holland, looking upon it as a drug, subjects it to a tax of five per cent. *ad valorem*, but now proposes to increase it to 60 gulden per kilo. Russia classes it with pharmaceutical and chemical preparations, and places a low tax upon it. Belgium collects an import tax of 140 francs per kilo, and the same for all articles containing as much as one-half per cent. of it. The United States impose a tax of twenty-five per cent.

It is mainly as a substitute for sugar that its introduction and manufacture are antagonized. And yet, this industry, if it continues to grow, will have to be looked into from a sanitary standpoint. The danger is from two directions. An increased demand for the saccharine, with consequent hurry in the manufacture and temptation to adulterate, would most probably lead to the sale of a much impurer article than is now placed on the market. Again, the glucose, or starch sugar, with which the saccharine is mixed to substitute cane-sugar, is very often carelessly manufactured and injurious to health. Careful government supervision would be necessary to secure a harmless article. With impure saccharine and and vile glucose largely used in confectionery, and as a general substitute for cane-sugar with the poorer classes of the community, the danger to public health would be great indeed. Saccharine and its utilization will have to be watched in the future.—*F. P. Venable in North Carolina Med. Jour.*

WE would call the attention of our readers to a very complete physician's battery, with current regulator, now being advertised in THE PRACTITIONER by the manufacturers, the Law Telephone Company of New York. In a communication, which our publishers have just received from them, the manufacturers state that since January 1st of this year they have sent eight of their "Galvanic Outfits" to Europe; three going to Paris, one to Boulogne, one to Berlin, two to London, and the last to Dr. Lawson Tait, of Birmingham. In his order for the battery Dr. Tait says: "It seems to me that your arrangements are more compact and less likely to get into disorder than any I have ever seen. I desire one of your fullest outfits. The arrangement seems to be extremely ingenious."

A CURIOUS VERDICT.—An embankment in Pennsylvania recently caved in on some railroad laborers, causing death. The verdict of the coroner's jury was: "Death of gravel."

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

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TORONTO, MAY 16, 1890.

MEDICAL EDUCATION IN THE UNITED STATES AND CANADA.

The report of Dr. Rauch, Secretary of the Illinois State Board of Health, on medical education in the United States and Canada, which we have just received, gives much valuable and interesting information. It shows that there are altogether 139 colleges in existence, of which there are 126 in the United States, and thirteen in Canada. The total number of colleges requiring attendance on three or more courses is sixty-four. There are still sixty-two colleges in the United States that only require attendance on two courses. It is certainly remarkable that in this great country, containing such institutions as Harvard, Johns Hopkins, Universities of Michigan and Pennsylvania, etc., this condition of things should exist. But that there is a great improvement in this respect is shown by the fact that in 1882 there were only twenty-two colleges requiring the three years' course. The total number of colleges exclusively for women is eight, of which two are in Canada. The total number of students attending lectures during the session of 1888-9 was 13,714 in the United States, and 1,491 in Canada.

The following is a list of the medical colleges in Canada, with the number in attendance during session 1888-9, as reported by the authorities of the various schools: Trinity Medical College, 289; Medical Faculty, University of Toronto, 258; Medical Faculty, McGill University, 233; Ecole de Medicine et de Chirugie, of Montreal, 202; Royal College of Physicians and Surgeons, of Kingston, 150; Laval University, Medical Departments of Quebec and Montreal, 149; Medical Department of the Western University, London, 64; Medical Faculty of Bishops College, Montreal, 39; Manitoba Medical College, Winnipeg, 30; Halifax Medical College, 19; Woman's Medical College, Toronto, 35; Woman's Medical College, Kingston, 23. It will be seen from these figures that about forty per cent. of all the medical students in Canada are being educated in Toronto, and about the same proportion (including the French students) in Montreal.

It is stated that no less than eight new medical Colleges were opened during the past year in the United States. We find the following sensible comments on this fact: "In this connection it becomes a serious question to consider in regard to any new school, whether it is properly equipped from a teaching, a laboratory, and a clinical, standpoint. Can it be said with truth that there is any necessity for additions to the present large number of medical schools, some of which are not now properly provided for, and therefore hold out inducements, with results which tend so much to cast a stigma upon medical training and medical diplomas in the United States? More attention should be paid to securing endowments for medical institutions now existing, giving them more and better facilities to instruct, than to the creation of new schools inadequately endowed." One of the foot notes tells us: "The craze for establishing medical colleges, commenced in the United Statesabout 1840, and continued uninterruptedly until 1880, when there was a lull, but it seems again to have broken out. The chances of survival of new colleges will be better appreciated when it is borne in mind that since 1850 there has been a mortality of over three per year, and that, at this time, more is required of the graduates of such institutions than at any period in the history of medical education in this country."

THE TORONTO SCHOOL OF MEDICINE.

Some people appear to think that the old Toronto School of Medicine is now the Medical Faculty of the University, and as such controls all matters connected with this Faculty, with the result of increasing the incomes of the members of the former corporation. Such an idea is incorrect, and, as it is likely to

create some prejudice against the new order of things in the minds of many who favor advances in medical education, we think it desirable to state a few facts in connection therewith. The Senate of the University decided to establish a medical teaching faculty before consulting any school, and to have absolute control over such faculty. After arriving at such decision, it made offers to both schools then teaching in Toronto. Trinity refused to accept the proposals of the University. The Toronto School took a different stand, and the majority of its staff (not all, we regret to say) received positions in the new Faculty. There are now in the University staff seventeen out of the thirty-two teachers who had nothing to do with the Toronto School. Even among the remainder there was such a redistribution of the work as to alter very materially the complexion of the staff. This will probably show to the most sceptical that there is in reality a new staff. Supposing, however, for the sake of argument, that there is still too much Toronto School represented (although we do not admit it), time will, ere long, provide the remedy. A new system has been established, by which the Senate, a perfectly independent body, will have every opportunity to fill vacancies as they occur with the best available men. In this same connection it may be worthy of note that all appointments are made for a period not to exceed five years.

As far as emoluments are concerned, it so happens that the teachers, who formerly belonged to the Toronto School, receive smaller salaries from the University than under the old regime. This means that they have actually lost money by their connection with the University. Not only are they required to work for less remuneration than that received by the teachers of any of the large medical colleges of Canada, or the United States, but they must, in addition, engage in the very laborious work of examining the students, without any remuneration. At the same time all examiners not connected with the staff are paid for their work according to a fixed scale.

It is only just to the Toronto School of Medicine to say that its record from its incorporation to the present time has been an admirable one. This is, perhaps, not as highly appreciated as it ought to be. It is probably pretty generally recognized that the establishment of the Ontario Medical Council has done a great deal to raise the standard of medical education. Members of the Toronto Faculty did much to bring it into existence. We think it right to point specially to the indefatigable and untiring exertions of Drs. H. H. Wright and W. T. Aikins, who worked so faithfully and so effectually in this direction. This was not, however, the commencement of their work in the interests of an elevation of the standard. For many long years the members of the Toronto School Faculty were true in their allegiance to the University of Toronto, while their pockets were suffering sadly from their fidelity. Without going too much into details, we may say that their loyalty received no encouragement from the Senate.

The Toronto School was placed on the same basis as medical schools largely in sympathy with other Universities. It was expected that the "double affiliation" regulations would soon bring many, if not all, the Provincial schools into sympathy with the University. We need hardly add that such anticipations were never realized. In self-defence the Toronto School had to adopt the same principle for herself, and obtain further affiliation. With a choice of Universities thus procured, her numbers of students were growing rapidly, and in the spring of 1887 her prospects were brighter than ever before. This was the position when Toronto and Trinity Schools were asked by the Senate of the University to assist in the formation of the Medical Faculty. Both were in a very prosperous condition. The University's high standard had been ahead of the times, and had never been well supported. The Toronto school had already lost too much through the University. The older members of its Faculty had had to struggle hard for many years without any remuneration, sometimes with considerable loss in building up their school. In the climax of their success they were asked to surrender all their powers, give up their name, sink their identity, work for smaller remuneration, and give up a certainty for an uncertainty—all in the interest of higher medical education. Their sister's answer was short, sharp, and decisive "No!" Toronto's answer was "Yes!" Her decision was a noble and generous one, and we are pleased to know that her unbounded confidence in the sense of justice of the Senate, and

her hopes of success for advanced and scientific methods of teaching, are not likely to meet with any disappointment.

NOTES.

THE BRITISH COLUMBIA MEDICAL COUNCIL.—The election for the Medical Council of British Columbia was held last month, the vote being counted April 29th, with the following result: Dr. G. L. Milne, of Victoria; Dr. W. J. McGuigan, of Vancouver; Drs. E. B. C. Harrington and J. C. Davie, of Victoria; Dr. Tunstall, of Kamloops; Dr. Le Fevre, of Vancouver; Dr. Smith, of New Westminster. Of these, six were members of the former council, while the seventh, Dr. Smith, takes the place of Dr. Trew of New Westminster.

ONTARIO MEDICAL ASSOCIATION. The next meeting of the Ontario Medical Association, which, as we announced in our last issue, will be held June 11 and 12, is likely to be one of the most successful that the society has known. The President, Dr. Temple, of Toronto, has exhibited his usual ability and energy in his efforts to complete all the arrangements in a satisfactory manner. He has been well supported by the worthy and industrious secretary, Dr. Wishart, whose labors in this connection have not been light. Among the distinguished visitors will be Drs. T. A. Emmet and Andrew Smith, of New York; Dr. Goodell of Philadelphia, and a few representatives from State associations. The meeting will be held in the new building of the Ontario Medical Council, on the corner of Bay and Richmond streets; the regular sessions in the large examination hall, the meetings of sections in the smaller rooms. The building is not specially adapted for such a meeting, but it is considered the most suitable place for an association composed of physicians of Ontario.

MEDICAL ALUMNI ASSOCIATION OF THE UNIVERSITY OF TORONTO.—The annual meeting of this association was held in the Medical Council building, on Friday, September 9th, at 4 p.m., with the President, Dr. Thorburn, of Toronto, in the chair. After the ordinary routine business, a number of new members were elected. The following were elected as officers for the ensuing year: President, Dr. Geo. Shaw, Hamilton. Vice-Presidents, Dr. Spencer, Toronto; Dr. Henry, Orangeville; Dr. Horace Bascom, Uxbridge; Dr. Clarke, Kingston; Dr. McConnell, Toronto. Treasurer, Dr. Riordan, Toronto. Secretary, Dr. Harley Smith, Toronto. Council, Drs. Acheson, J. F. W. Ross, McPhedran, Cane, Machell, Ellis, and R. B. Orr, Toronto; Dr. Olmstead, Hamilton; Dr. Moore, Brampton; Dr. Bennett, Jarvis. In the evening the annual dinner was held in the Queen's Hotel. In the absence of the newly elected president, Dr. Shaw, the chair was occupied by Vice-President Dr. Spencer. The proceedings were altogether informal in character, there being practically no set speechifying or toasting. An exceedingly pleasant hour was spent after the manner of a large and happy family gathering.

Meeting of Medical Societies.

THE PATHOLOGICAL SOCIETY OF TORONTO.

February 22nd, 1892.

The president, Dr. R. H. Reeve, in the chair.

CASE OF BRAIN DISEASE.

Section of the brain, the clinical history of which was given by Dr. McPhedran at the last meeting, showed suppuration of the corpus callosum extending through the lateral lobes into the posterior lobes. This was more marked on the left, although present on both sides. There was also a small patch of softening in the centre of the cerebellum. A thrombus was found in the left cerebral artery.

Dr. I. H. Cameron argued from the symptoms that the lesion in the cerebellum was probably primary. The case was hardly regular, for the plugging of the left cerebral artery should have caused complete hemiplegia.

Dr. J. E. Graham had seen a case in which the symptoms were the same, with the exception of the peculiar gait. In that case there was softening of one of the hemispheres down into the crus. Lesions of the corpus callosum are rare. Irregularity of gait is a symptom of tumor of the corpus callosum. The lesion in cerebrum seemed so much farther advanced than that in the cerebellum, that the cerebellar dis-

ease could not account for the peculiar gait. There was no thickening of the arteries to be found.

Dr. W. P. Caven thought that disease in the vessels must have caused the embolism.

MORBUS COXÆ.

Dr. I. H. Cameron exhibited the left femur from a case of morbus coxæ. The patient, a girl of three, was admitted into the Hospital for Sick Children with hip-joint disease in the third stage. There were several sinuses opening above Poupart's ligament. Extension was applied and every effort made to feed the child up. An operation was not thought advisable, because the acetabulum was, to all appearances, affected. The girl was in the hospital for three years, during which period abcesses developed from time to time.

Post mortem examination showed amyloid disease of the liver, which was so enormously enlarged that there was scarcely a half inch of space between the edge of the liver and the crest of the ilium. The os innominatum was greatly thickened, but there was no perforation of the acetabulum. The cartilage lining the acetabulum had disappeared, as had the head and part of the neck of the femur. The posterior surface of the neck was united to the body of the ischium by fibrous tissue. The medullary cavity of the shaft was much enlarged, so that only a very thin stratum—two lines in thickness—of compact bone remained. The remains of the capsule and other fibrous tissue about the joint was very much thickened, especially over the upper part of the great trochanter, where an incision in this region opened into a somewhat large abscess cavity, about the size of a sparrow's egg. The fibrous tissue was closely adherent to the periosteum, which was apparently quite healthy where it still remained. Microscopic examination showed amyloid disease of the liver, spleen and kidney.

From the light thrown by the *post mortem* upon the condition of the femur and joint, it was to be regretted that excision had not been done.

Dr. Thistle saw in the fibrous, thick, walled cyst surrounding the head of the bone, an effort at reconstruction on the part of the periosteum. It extended too far down the shaft to be a part of the capsule.

ANEURISM OF AORTA.

Dr. Cameron said that this case was interesting, not only on account of the seeming acute development of the aneurism, but also because the patient was commonly reported to have died of la grippe. The patient was a man of 35, banker by occupation, very tall and thin. He was a great oarsman, one of the Argonaut eight, and spent most of his leisure time either rowing or canoeing. He had never had any illness, save some slight attacks of dyspepsia. Nothing had ever occurred to indicate any heart lesion.

Dr. Scadding, who had attended the patient for Dr. Cameron, had found him dressed for dinner. Whilst dressing, he had been suddenly seized with great pain, referred to the pit of the stomach and abdomen, passing up into the throat, which he described by saying that he felt as if he would burst asunder. There was no heart murmur or noticeable dullness; pulse 50. He was put to bed and morphia given hypodermically, with but little relief of the pain. Morphia granules, gr. ¼, were given, to be taken every 3 or 4 hours if needed. On the following day the pulse was 90, on the third day pulse was 116. The pain persisted, but was localised more in the region of the umbilicus. That evening he had a spasm and died. *Post mortem* examination showed, at the base of the aorta, a dissecting aneurism, which had ruptured. There was no laminated clot in the sac. The blood in the pericardium was clotted; on the visceral pericardium a few milk patches. Heart was dilated, but not hypertrophied.

It was supposed that on the first night the internal coat had given way. The pain had been kept up by the dissecting blood. The aneurism was evidently of very recent date, as shown by the fact that there was no hypertrophy of the heart, and by the absence of a laminated clot in the sac.

CEREBRAL HEMORRHAGE, CANCER OF PANCREAS.

Dr. Cameron: The patient, a man of 70, was a shoemaker by trade. Eight years ago he came for advice concerning attacks of vomiting blood, and of pain referred to the stomach. It was thought that thickening could be detected in the epigastric region, and therefore a diagnosis of cancer was made. This diagnosis was rather shaken by the fact that ordinary treatment for dyspepsia relieved him, and by the duration of life.

I was sent for one afternoon to see him, but found him so well and jolly that I concluded there was not much the matter with him. That evening, at 8 o'clock, he complained of feeling a little sick and of pain in the head; no paralytic symptoms at any time. An hour and a half later he was dead. I had never known death to occur from cerebral hæmorrhage in less than 8 hours.

Dr. Cameron said that the condition of the stools could never be ascertained. The patient was not a drinker. There had not been a hæmatemesis of late. The hæmatemesis must have been due to obstruction of the vessels of the stomach by the growth.

Dr. Peters, who performed the autopsy, said that there was found an extensive hemorrhage into the meninges of four or five ounces of blood. This came from a rupture in the basilar artery. The arteries at the base of the brain were markedly atheromatous. There was no interstitial hemorrhage.

There was a hard, nodular tumor, involving the whole head of the pancreas, surrounding the pylorus, but not involving it, for it was still patent. The stomach was but little dilated. The growth had surrounded and caused the disappearance of the gall bladder and cystic duct. The common duct was found. The liver was slightly shrunken. There were adhesions to the transverse colon, hepatic flexure, and omentum. There was a cystic condition of the left suprarenal capsule, while the right was unaffected.

CHYLOUS URINE.

Dr. Graham exhibited a specimen of chylous urine, obtained from a patient of Dr. Todd's, who had typhoid fever complicated by pneumonia.

A. B. Macallum:

NORMAL PROCESSES OF DEGENERATION IN THE UTERINE MUCOSA OF THE PLACENTAL SITE IN THE CAT.

The greatly enlarged endothelial elements and the glandular cells of the placental mucosa in the cat, present many points of interest in connection with the studies on the degeneration of cells in epithelial neoplasms. That they are of great physiological importance to the embryo, my studies, I think, have shown unmistakably.

The ordinary endothelial cells of the maternal bloodvessels, increase in size simultaneously with the widening of the latter till each capillary appears like a gland tubule lined by large irregular cells, with a tortuous lumen in the centre. The edge of the cells next the lumen have a granular border, and they are separated from the syncytium of the fœtal ectoderm by thin strands of fibrillar tissue. The latter is seen with difficulty in some places, where the endothelial cells appear to abut directly on the syncytium. This is especially the case in the stage where the embryo measures less than an inch in length. At this stage, also, the endothelial cells frequently exhibit indirect division, the amount of chromatin present in such cases being remarkably small is comparison with the amount of the cytoplasma. The latter condition recalls a common peculiarity in epithelial neoplasms. At this stage in the placental history, the division of the nucleus, apparently, usually is followed by division of the cell, but in the placenta at later stages (when *e. g.* the embryo is nearly 3 inches in length) the division of the nucleus is rarely followed by division of the cell, so that in the latter we frequently see two or more nuclei, each larger than the single nucleus of the earlier stages. This condition is accompanied by certain changes in the cell body, which becomes vacuolated, especially towards the periphery, and the cytoplasma becomes fibrillar, the fibrillæ radiating towards the cell boundaries. These cells are separated from the lumen of the bloodvessel by a new endothelial lining composed of small endothelial cells and a hyaline membrane, the cells and the membrane appearing perforated by canals like those in the peripheral border of the epithelial cells of the intestine. The older endothelial cells exhibit plasmolysis either in one of their nuclei or in the whole cell. The nuclear contents in some cases appear to undergo chromatolysis. When a whole cell degenerates, the mass acquires an eosinophilous character, fragments, the pieces are taken up by the protoplasm of the syncytium of the fœtal villi, passed through the cellular layer and thrown into the lymphatic spaces of the villi. On their passage the fragments become more numerous and smaller, till finally they are of granular size. In earlier stages (when the embryo measured less than one inch in length), similar yolk-like masses are seen

n the syncytium of the villi, but they apparently come from the absorbed and degenerated tissues in the path of growth of the villi.

Here we see that the degenerated cells serve for the nutrition of the embryo. The chromatin and protoplasm of the endothelial cells pass directly into fœtal tissues, when they can readily be detected with staining reagents.

The glands at the base of the placental layer of the mucosa also degenerate, but the process is somewhat different. At points in the epithelial wall of the gland the cells increase in number; they elongate by pressure, and the mass so formed projects into the lumen of the gland for a distance two or three times the height of the original epithelial layer. The nuclei of some of these cells become homogeneous or plasmolysed, and both nucleus and cell are set free in the lumen. Here further degeneration occurs, accompanied by gradual diffusion of the chromatin through the mass, which now fragments. Sometimes the protoplasm of degenerated cell disappears as if through digestion, leaving the chromatin in small masses, which run together, forming deeply colored spherules in the centre of the lumen. The fate of this chromatin was not observed distinctly, but it was inferred where a villus had broken through and projected into the lumen of a gland tubule, that epithelial cells covering the lower end of the villus were irregular in shape, with long, pseudopodial processes stretching out into the granular debris of the lumen, and apparently functioning as absorptive organs. In the substance of the process one can see granules similar in character to those found amongst the debris. One can, furthermore, find in the axial part of this end of the villus, an elongated mass of chromatin, apparently derived from the chromatin of the broken down gland cells. In the later stages of gestation the greater part of this chromatin, which persists, owing to slow assimilation, becomes mucinoid.

Thus, in the placenta of the cat, are to be seen many processes which find their parallel in conditions occurring in neoplasms, etc. The parallel is not surprising, since the embryo is, from one point of view, a foreign body, a parasite, which irritates, though physiologically, the structures of the uterine mucosa, and calls forth in its cells changes such as those described above. In fact, the growth and changes in the placenta belong to the class of phenomena which concerns the border-land between pathology and physiology.

TORONTO MEDICAL SOCIETY.

April 22nd, 1890.

The President, Dr. Atherton, in the chair.

CONVENIENT METHOD OF RETAINING DRESSINGS.

Dr. W. B Nesbitt attaches to a piece of rubber adhesive plaster, a piece of tape on which hooks are sewn at intervals of one inch. Such a tape may be bought at any dry goods store. One of these strips of plaster is fixed to the skin on each side of the wound, and the dressing is held in place by a lace passing backwards and forwards through the hooks. The principle is very much the same as that of the Farny suture, which, however, it is superior to in the ease of threading. This dressing had been found specially useful in cases of empyema, and spinal abscesses. It does away with the necessity of a bandage, and the dressing can be readily changed without removing the plaster.

ACUTE PERITONITIS.

Dr. J. F. W. Ross related the history of a case in which laparotomy had been performed. There was extreme distension with both gas and fluid, and the patient was "in extremis." When the abdomen was opened, there was found on the one side a suppurating ovarian cyst, and on the other a suppurating hæmatocele of the broad ligament. The peritoneal cavity contained a large amount of serous fluid, but no pus; whilst the whole peritoneum was studded with fibrinous deposits. There was pretty free hemorrhage. The pulse dropped to 100; the temperature also came down, but the septic trouble was too much for the patient, and, in ten hours the temperature and pulse went up, and death ensued. Dr. Ross has not much faith in the occurrence of "idiopathic" peritonitis: in all cases some local cause may be found, and the proper treatment is early abdominal incision.

Dr. Atherton thought that such cases were often let go too far before surgical interference was had recourse to. In women there may be many cases due to local causes, yet in men such local causes were not always to be found, and such cases were really idiopathic, and should be

treated not by cathartics or by abdominal section, but by opiates.

April 29th, 1890.

FRACTURE OF ZYGOMA.

Dr. Cuthbertson presented a patient—a young man—with a depression over the zygomatic arch. He had been, that morning, struck a blow by a fist. There was no swelling or bruising of the soft parts, and scarcely any pain. He thought that there was a fracture of the zygoma, with displacement of the fragments.

In the discussion, the majority of the members expressed an opinion that there was no fracture, but that the depression in the bone was probably congenital, the attention of the patient having never been attracted to it before the blow.

Dr. McKenzie agreed with Dr. Cuthbertson that the bone was fractured, and related a case where a similar injury was due to a blow from a cricket ball, the man being unconscious, and blood coming from the nose and ear.

DIPHTHERIA.

Dr. Price Brown related the history of a case of diphtheria in a child of fourteen months, whom he saw in consultation. Patient was greatly cyanosed, but there was no membrane visible in the throat. Vesicular murmur was absent over the chest, and there was bronchial respiration. Resonance was unimpaired. He performed tracheotomy, and there was instant relief, and consciousness returned. Though blood and mucous passed freely from the tube, no membrane came away. The child sat up and took milk greedily, and respiration was almost normal. Next day the child had a convulsion, and gradually sank. Death was not due to stenosis, pneumonia, or bronchitis. He was in doubt as to the cause.

Intensity of the septic trouble, cerebral thrombosis and overloading of the stomach were suggested as possible causes of the convulsion.

Dr. Brown, in reply, said that it was quite possible that the large amount of milk taken, and also the administration, by the mother, of a dose of iron, contrary to instructions, forming a coagulum in the stomach, had caused a reflex convulsion. He could not fall in with the idea that death was due to cerebral thrombosis, or to septicæmia.

HERNIOTOMY.

Dr. J. A. Watson presented a specimen of irreducible left inguinal hernia. The hernia had existed for many years, and was apparently chiefly omental. The patient had frequently reduced it and wore a truss. On the last occasion taxis, ice, etc., had been tried in vain. Bowels had moved, and flatus was passed with difficulty. Patient was removed to the General Hospital. Dr. Nevitt operated, making an incision over the tumor down to the sac, dividing the ring freely, but the hernia could not be reduced. The sac was then opened, but, on account of numerous firm adhesions, the gut, now seen to be the large intestine with the appendices epiploicæ, could not be returned. The bowel had also the appearance of becoming gangrenous. A median abdominal incision was then made, and the attempt at reduction by pulling on the gut from above was unsuccessful. The adhesions were then ligated and divided, and the bowel, thus freed, was returned, and the wound sutured. The operation lasted five hours. The patient rallied well, but died about forty hours after the operation.

They were led astray in this case by the patient's positive statement that he had completely reduced the hernia a day or two before.

Dr. Gullen asked why, when the hernia was found to be irreducible, but not strangulated, it had not been left alone.

Dr. Atherton said the general practice now was to open the sac at once, and, if the bowel is not reducible, to divide the neck of the sac and leave it.

Dr. Watson replied that it was impossible to leave this after opening the sac, as the large mass of the large intestine with the attached fat could not be returned to the scrotum.

May 6, 1890.

CRUTCH PARALYSIS.

Dr. B. E. McKenzie related the case of a boy twelve years of age, under his care for hip joint disease, who, wearing a Thomas' posterior splint, was going about with the aid of a crutch. The other day there was noticed a condition of wrist drop of the left side; paresis of the muscles of the hand, but not of the forearm. The boy was ordered not to use the crutch on that side, but did not obey orders. He also got electrical treatment. The paresis becoming more marked

he was ordered positively to quit the crutch. The trouble began by a numbness down the back of the hand.

GASTRALGIA.

Dr. J. E. Graham related the history of a physician in the asylum service, who had attacks of gastralgia, which began four or five years ago, with periodical severe pain in the stomach and vomiting; not influenced by food. The vomited matter usually contained a large amount of mucus. The attacks became more frequent, occurring several times a day, and there was great emaciation. He went to the old country and consulted Gairdner, McAll Anderson, and others. Before going away it was thought that he had carcinoma, but the general opinion there was against this, though no definite diagnosis was made. There was no evidence of tumor by physical examination. He came home and got quite well, and continued so for a year. He then had some worry about a new building, and the excitement of a fire in the asylum caused a return of the symptoms, and he got worse and worse.

Dieting, quinine, arsenic, and massage were tried, but without effect. He then gave up the asylum. Being thus freed from all strain and worry, he became quite well, and has remained so now for two years.

During his second bad attack he had an outbreak of Herpes Zoster on both sides.

REFLEX GASTRALGIA.

Dr. W. Britton related the case of a young lady, who consulted him some two years ago, for pain in the stomach, at first not very severe; no vomiting or tenderness. Gastralgia was diagnosed, and various remedies used without effect. One day he asked if she had any bearing down. She said that she had had for several months. Examination revealed complete retroversion of the uterus. This was reduced, and the gastralgia, evidently reflex, disappeared.

Pathology.

THE PASSAGE OF BACTERIA THROUGH THE INTACT SKIN, AS A RESULT OF RUBBING. Machnoff *(Russkaje Medicina)* has shown: (1) That it is possible by rubbing to cause bacteria to pass through the unbroken skin. (2) That the corneous layer of the skin is a reliable safeguard against the transmission of germs, but that the hair follicles afford a ready passage to the lower layers of the corium.

Hospital Reports.

INTESTINAL OBSTRUCTION—LAPAROTOMY—RECOVERY.

UNDER THE CARE OF J. ALGERNON TEMPLE, M.D., M.R.C.S., ENG., IN THE TORONTO GENERAL HOSPITAL.

Mrs. C., aged 36, a widow with two children, had always enjoyed good health, had always been free from headaches and constipation. For the past three months she had constantly been complaining of feeling tired and worn out; this she attributed to close confinement at her work, sewing furs. She was first seen by Dr. Parker on March 8th, suffering from pain in the stomach, in the small of the back, and in the left side just below the region of the spleen. These symptoms had existed for a week, and at first there had been slight vomiting; the temperature was slightly elevated; she exhibited marked distaste for food, and the pain in the stomach was increased by the ingestion of food. There was no abdominal tenderness. The temperature became normal after a few doses of quinine had been administered, and remained so; the pain in the back soon disappeared; the pain in the side lingered for a week or more, but subsequently disappeared also.

Poultices were applied to the epigastrium, and the diet restricted to milk with lime water, and the following pill prescribed:

R.	Res. Podophyl.	gr. ¼.
	Ext. Hyoscyam.	gr. ½.
	Ext. Colocynth. Co.	gr. ½.
	Ext. Nuc. Vom.	gr. ½.

She took one of these pills three nights in succession, then one each alternate night, and the bowels acted satisfactorily each day without pain. She gradually began to take a less restricted diet, and at the end of two weeks was able to leave her bed, and to go about her house. At the end of another week she took a walk out of doors, and the next day she complained of griping pains; the bowels had been

regular up to this time, but on the day on which these pains occurred there was no motion. On the following day the pains were more severe, were paroxysmal and accompanied by contractions along the colon; the course of the peristaltic movement could be seen on inspecting the abdominal parietes. A large enema of soap and water was administered, and a powder containing calomel, grs. iv., pulv jalap, grs. viii., but no evacuation followed. Enemata of soap and water, containing castor oil and turpentine, were then given, with calomel, castor oil and turpentine by the mouth, but nothing whatever passed through the bowel. She continued to take small quantities of buttermilk, and there was no vomiting. Upon the fifth day after the abdominal pain and constipation commenced, Dr. Temple was called in consultation. A copious enema was administered with the foot of the bed raised; she complained of the stomach being "pressed upwards," and vomiting occurred and persisted for several hours. The vomited matter was, as far as could be ascertained, all fluid, and had a very foul odour. The temperature for several days had been about 100°.

She was admitted into the Toronto General Hospital under the care of Dr. Temple, April 6th. Bowels were very much distended with flatus, and she complained of a considerable amount of pain, with a constant desire to have the bowels moved. Ordered her to have a copious hot soap and water enema, with the hips raised and the head lowered. Only a small quantity of water, however, could be inserted, as it returned almost immediately without any fæcal matter.

April 7th—temperature, 100°; pulse, 110; face flushed and anxious, restless and uneasy; bowels greatly distended, especially the colon which stood out prominently. Some dulness in the flank. Dr. Macfarlane saw her, and it was agreed not to do anything more than to keep her quiet. Dr. Temple carefully explored the rectum but could detect nothing, it was simply contracted.

April 8th, 10 a.m., temp., 97°; pulse, quiet and small; face, pinched and anxious; bowels had not moved. This was now the eleventh day without any evacuation from the bowels, and it was deemed expedient to wait no longer. 11 a.m., patient was put under chloroform, and, assisted by Dr. McFarlane, Dr. Temple made an exploratory opening in the abdomen. The large intestines from the cæcum to the rectum were enormously distended with flatus, probably to three times or more their normal size, very red and congested. The small intestines were red, congested, and triflingly distended. The whole length of the colon was explored for fæcal accumulation or any obstruction, several times, without, however, finding anything, and after searching in vain, the abdominal cavity was washed out with hot water. The incision was five inches in length, and it was very difficult to keep the bowels in on account of their great distention; they were kept carefully covered up in cloths wrung out of hot water. The abdominal wound was closed with silk suture and powdered iodoform with iodoform gauze, and patient put to bed in a very collapsed condition. She, however, rallied quickly, and six hours after the operation passed a large quantity of flatus, and twelve hours after the bowels moved freely; within twenty-four hours she had three large stools, and on the fourth day diarrhœa set in. Her progress towards recovery has been steady and uninterrupted. Stitches removed on the sixth day; wound quite healed, and the patient convalescent.

Remarks by Dr. Temple: It is plainly evident from the distention of the colon and cæcum the obstruction was at or near the sigmoid flexure, and that the obstruction was probably volvulus, and that in the examination of the bowels the twist had become loosened. This is a case certainly in favor of exploring for cases of obstruction where ordinary measures fail to give relief.

Correspondence.

Editor of CANADIAN PRACTITIONER.

SIR,—In the PRACTITIONER for April 16th, Dr. McGuigan, of Vancouver, writes in the hope of obtaining from the profession a more favorable opinion of the B. C. Medical Council than would be the case were your editorial of March 17th allowed to go unchallenged.

While conceding that my pamphlet "had good effect in some quarters," he most decidedly objects to the idea that the Council "was very apathetic in this matter."

As Dr. McGuigan writes as president of the Council, you f el in duty bound to accept his statements, and accordingly you withdraw your previous remarks anent that body.

But, sir, permit me to say that the *ex parte* statement of the president is not so unreservedly correct as you appear to imagine. So "quietly" did the registrar and president work that not a soul knew anything was being done—not even the registrar himself, if I may judge from his own words on the occasion of an interview I had with him last November, when he said, with a degree of vagueness remarkable in one who was working "so sincerely," "something ought to be done"! I accuse the Council of apathy, not only in reference to the unjust sections of the Medical Acts, but also in permitting the medical laws, which it is empowered to enforce, to be broken with impunity. One medical gentleman thus wrote to me a few weeks ago: "Dr. Milne and other members of the Council know just as well as I do that there are several men, some not qualified, others qualified, but not registered, who are practising in defiance of the Act; then why should I pay fees for that protection which I, in common with others, do not receive?"

Two other correspondents refer to instances in Vancouver where the Medical Act is openly set at naught. There are over seventy names on the medical register of B. C., and only forty have paid their fees. And why? In most cases because of the apathy of the Council; they don't feel inclined to pay for what they do not get, *i.e.*, protection.

I venture to assert that had I not written my pamphlet, I doubt whether the obnoxious sections would have been repealed this session. The Attorney-general introduced a bill to repeal one of the unjust provisions *shortly after I issued the "notes,"* and Dr. Milne told me that Dr. Davie, the Attorney-general's brother, declared he had *no knowledge* of his brother's action. Of course Dr. Davie may, at a later stage, have given his brother some assistance; that I know nothing about, and it does not concern the question. Besides all this, not until Mr. Davie had, *unaided*, introduced his bill, did the Council's executive prepare *their* draft bill (if they care to recollect, they will remember that they intended asking Mr. Grant, M.P.P., to introduce their bill). Mr. Grant did not do so; on the contrary, he spoke against the bill reintroduced, amended, by the Attorney-general. Mr. Davie was *not* inspired to take the first step by the Council, nor any of its members, and they all know that perfectly well.

Of course, the Council members do not like being twitted on the score of lack of interest in their duties; few people relish being "hauled over the coals," and however diligently the president of the B. C. Medical Council may strive to lead you and your readers to believe that the Council did the lion's share in bringing about the recent reforms, he will utterly fail to convince the practitioners of this province. I ask you, sir, is it possible for a medical council to work incessantly and yet no one know of it? The Medical Council is not a secret society, that its work should be done with such profound secrecy. To amend the Medical Acts some public action was necessary; this they did not do, but I did. I flatly deny the president's statement that the Council members did their duty "faithfully and well." On the contrary, they were, and are, *afraid* to take any spirited action, lest they should offend and perchance lose some patients!

Your editorial of 17th March was substantially correct, and I regret that you have considered it advisable to withdraw it. The fact of the president's attempting to secure for the Council all the credit for the repeal of the section admitting British graduates for a $10.00 fee, does not prove that his claim is a just one. The "we succeeded" is very misleading. Had Dr. McGuigan said Dr. Wade succeeded, it would have been nearer the mark. The Council did absolutely nothing *until after I had issued my pamphlet.* That woke them up; "we must do something;" said they. I paved the way, they followed, and now they want all the credit!

I now charge the Council with neglecting its duties. Had the Council done its duty, would it not follow that there would be more satisfaction among the profession than is expressed? A good criterion is the coming election of the Council. There are 40 voters and *12 candidates* (all of whom are included among the 40 voters), six of whom are in the field for the first time. A few good men will get in; some others not so good will also succeed; but, however the

poll may go, it is to be hoped that the new Council will endeavor to erase the blot made by the old one, *and do its duty*.

I trust Dr. McGuigan, whom I esteem, will understand that I make these remarks not at him, nor at the registrar, but at the Council as a body corporate, with duties to perform, and, in this instance, left undone.

MARK S. WADE, M.D., F.C.S.

Victoria, B. C., April 28th, 1890.

Book Notices.

Asthma, considered specially in relation to Nasal Disease. By E. Schmiegelow, M.D., consulting Physician in Laryngology to the Municipal Hospital, etc., Copenhagen. 8vo., pp. 90. London: H. K. Lewis, 1890.

That the author, though a specialist, has studied his subject in a broad spirit is indicated by the closing sentence of his book: "It must always be remembered that one has to do with a suffering person, who is not merely an appendix to his nose." He adopts Germain See's pathology of asthma, viz., that it is a neurosis in the respiratory centre in the medulla, caused by an elevated reflex irritability, native or acquired, in this organ. The attacks are due to irritations, originating in the vagus or other peripheral nerves, and show themselves in the motory nerves of the inspiratory muscles, especially the diaphragm, in which the contractions become tetaniform. At the same time the vaso-motor centre, also in the medulla, is irritated, causing reflex dilatation of the vessels in the bronchial mucosa, from which results the copious secretion. That the asthmatic attacks in many cases are due to irritation in the nasal cavities is shown by such facts as (1) that asthma may return when nasal disease gets worse, and be relieved by improving the nasal condition; (2) the aggravation of the symptoms in some cases by treatment of the nasal tract; (3) the relief of symptoms by tamponing the nose with wool containing cocaine or menthol. The author warns us against the error of ascribing all cases of asthma, in which nasal disease exists, to such disease, as in some, other causes, as bronchitis, are present also, while in others the nasal affection has no causation relative to the asthma. Though not accepting wholly the author's pathology of asthma, we have read the work with much pleasure and profit, and heartily commend it to the profession generally as a work that will prove very helpful to the general practitioner in the treatment of a disease that too often defies our best efforts The publisher's work, as usual, is excellent.

Personal.

Dr. Annie L. Pickering has returned home after a five months' visit to Birmingham, England.

SIR WILLIAM JENNER has left London and retired from active practice. He will live near Southampton. He is in good health and intends to do some literary work.

DR. G. L. MILNE, of Victoria, and Dr. H. Watt, of Barkerville, B.C. will receive the degree of M.D., *ad eundem*, from the University of Toronto at the next convocation.

PROFESSOR RAMSAY WRIGHT sailed for Europe the last of April. He will spend most of the summer on the Continent, where he will make a rather extensive university tour.

DR. J. E. GRAHAM left Toronto, May 10th, for Washington, where he attended the annual meeting of the American Association of Physicians. At the conclusion of the meeting he went to New York, and sailed for Great Britain May 17th. He expects to go to the Continent, where he will remain some time, and will attend the Berlin Congress.

Births, Marriages and Deaths.

MARRIAGES.

GREIG—BURNS—On the 28th April, at the residence of the bride's father, 222 Simcoe St., Toronto, by the Rev. J. Alexander, uncle of the bride, assisted by the Rev. H. M. Parsons, D.D., Dr. W. J. Greig, Toronto, to Anne J. Burns, daughter of John Burns, Esq.

DEATHS.

At Toronto, April 30th, Sarah Bryant, æt 83, mother of J. E. Bryant, M. A., of the J. E. Bryant Co.

RUSSELL.—At his residence, 172 Simcoe st., Wednesday, May 14th, at 6:30, John P. Russell, M.D., Edin., aged 69.

Obituary.

DR. JOHN PARTINGTON RUSSELL.—Dr. J. P. Russell was one of Toronto's best known physicians. He graduated in the University of Edinburgh in 1846. A few years after this he came to Canada, and after practicing in Quebec for a time, removed to Toronto, where he was engaged in a large practice up to the day before his death. He had been in poor health for some weeks, but, with his characteristic, indomitable energy, he stuck faithfully to his work. On the morning of May 14th he was found dead in his bed, from apoplexy. He was 69 years of age.

ONTARIO

Medical Association

NINTH

Annual Meeting

June 11th and 12th, 1890.

The Tenth Annual Meeting of the Ontario Medical Association will be held in the City of Toronto on Wednesday and Thursday, the 11th and 12th of June.

Return tickets, at **One Fare and One-Third,** valid for seven days will be issued to all properly qualified members of the profession. Physicians desirous of reading papers or presenting cases, before this meeting, are requested to notify the Secretary of the subjects of such papers or cases on or before the 1st of May.

Copies of the new By-laws and Code of Ethics may be obtained from the Secretary on application.

J. A. TEMPLE, *President.* Toronto.

D. J. GIBB-WISHART, *Secretary.* 36 Carlton St., Toronto.

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THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management. The J. E. Bryant Company (Limited), 58 & 60 Bay Street.

TORONTO, JUNE 2, 1890.

Original Communications.

THE AMERICAN ASSOCIATION OF PHYSICIANS.

BY J. E. GRAHAM, M.D. TOR., L.R.C.P. LOND.

The fifth annual meeting of this association took place on May 13th, 14th and 15th, in the Surgeon-General's library, Washington. It might be of interest to your readers to have presented a brief sketch of the new building, and of the library and museum it contains.

Both museum and library owe their existence to the civil war. In order to promote military medicine and surgery, Surgeon-General Hammond, in 1862, ordered "all medical officers of the army to collect and to send to the office of the Surgeon-General all specimens of morbid anatomy, surgical or medical, which may be regarded as valuable, together with projectiles and foreign bodies, and such other matter as may prove of interest."

For the purchase of books to be used for reference in the compilation of the medical and surgical history of the War, Congress made an appropriation of $5,000 yearly.

Thus began both the museum and the library. They were for many years located in Ford's old opera house, where Lincoln was assassinated, but are now placed in a magnificent new building, for the erection of which, Congress, in 1885, appropriated $200,000. The structure is of plain red brick, four stories in height, and made up of a centre building and two wings.

The centre building is 112x53, while each of the wings is 60x131. The museum occupies one wing and the library the other.

There are twenty-four persons employed in the library, and twenty-two in the museum.

The capacity of the library is for 170,000 volumes. In July, '88, there were 95,000 bound volumes, and 135,000 pamphlets. The celebrated index catalogue was commenced in 1880, and the 11th volume is now in course of publication. $2,500 are annually spent in purchasing periodicals. The following figures will give an idea of the size of the museum. In July, '88, there were specimens of comparative anatomy, 1,687; specimens of normal anatomy, 2,961; pathological specimens, 8,354; instruments, 814; microscopes, 141; medals, 384; miscellaneous, 835.

Dr. Billings, the medical director of this flourishing institution, deserves the thanks of the medical profession of this continent, as to his efforts its present position is due.

The following is a brief summary of parts of the discussion of the Physicians' Association, which may be of interest to the general practitioner.

The proceedings began by the reading of a paper, by Dr. Reeve, of Chatanooga, on "Some Points in the Natural History of Typhoid or Enteric Fever." In the discussion which followed, Dr. J. C. Wilson spoke of the advantage of the cold-water treatment of typhoid.

Dr. Loomis said he had never seen a case of perforation in typhoid recover; but had seen recoveries from peritonitis. He had seen

œdema of the feet from venous thrombosis. Patients generally recover from softening of the heart muscle, but care should be taken during convalesence to avoid heart strain. When a mitral murmur is heard at the apex, there is danger of either of two accidents, cardiac thrombosis, or dilatation. Subacute gastritis, an occasional sequel of typhoid, is often brought on by the ingestion of improper food.

Weir Mitchell stated that there is local elevation of temperature over the tender spots in many cases of "typhoid spine." He is of opinion that spondylitis is present in such cases.

Dr. Pepper had seen excellent results from the continuous administration of nitrate of silver in small doses, from the very commencement to the end of the disease.

Dr. Budge, of Chicago, read an interesting paper on "Inflammation of the Appendix and Cæcum, and the duty of the Physician regarding them." He came to the following conclusions with regard to surgical interference :

(a) In acute cases, with rather protracted high temperature, and with distinct induration that does not yield in forty-eight hours.

(b) In cases of undoubted severe inflammation, lasting several days, even though no particular induration can be made out (violent appendicitis), and in acute localized peritonitis having its origin at the appendix, and producing marked constitutional symptoms (threatened peritoneal abscess).

(c) In all acute cases where large induration develops rapidly with high fever. Here extensive deposit and abscess are almost certain, and the operation should be early.

(d) In all cases advanced to subacute or chronic stage, with distinct induration and dullness (regardless of the temperature), since in most such cases pus is present.

(e) In all cases of undoubted chronic appendicitis, with recurring exacerbations, even if no induration can be demonstrated. In all such cases the patient is in constant danger of perforation of the appendix, and mortal peritonitis, and laparotomy and extirpation of the organ (if done antiseptically) reduce the hazard.

Dr. Atkinson was of opinion that constant watchfulness on the part of the physician is necessary, and that an operation should be done immediately before or shortly after perforation.

Dr. Fitz, of Boston, spoke of a case in which recurring attacks of peritonitis occurred, and when an operation was made, there was no evidence of perforation of the appendix. Seventy-five per cent. of all cases of appendicitis recover. Mortality of cases treated medically, eleven per cent.; of those treated surgically, forty per cent. He spoke of the difficulty of operation in cases where there were frequent attacks, and of the danger of hernia after operation.

Dr. Jacobi was of opinion that every physician should be able to perform the following operations : Herniotomy, tracheotomy, intubation, and laparotomy for appendicitis.

Dr. Pepper strongly dissented from Dr. Jacobi's opinion, saying that he had not known of a more severe and difficult operation than laparotomy under these circumstances.

At the afternoon session, a very interesting paper was read by Dr. Lusk, on "Antisepsis during Labor." He spoke of the great diminution of mortality in lying-in-hospitals, and attributed it to greater cleanliness, and use of antiseptics. He advises the use of the vaginal douche previous to delivery in hospital, but does not think it necessary, as a general, rule in private practice. He also spoke of the great value of corrosive sublimate solution. He preferred, in hospital practice, the antisetic diaper. He was of opinion that imperfect washing of diapers was a frequent cause of disease.

Dr. Pepper believed that the frequent and careless use of vaginal douches after confinement was a cause of puerpural septicæmia.

Professor Welsh referred to the fact that, according to recent researches, it is impossible to completely sterilise the vagina and the hands of the operator by corrosive sublimate solution. He thought, however, that the small amount of the corrosive sublimate adhering to the hands might be sufficient to hinder the propagation of the few germ cells remaining on the epidermis.

Dr. Weir Mitchell read a most interesting paper on the "Disorders of Sleep." He took up principally those of the pre-somnum and post-somnum stages. He spoke of the importance of noticing the presence of hallucinations in the pre-somnum as strong premonitory indications of insanity. It is, of course, possible in rare cases to have such hallucinations without

insanity supervening. Another disorder is the presence of fear or terror without known cause. The distinguished writer also spoke of waking and post-somnic paresis and paralysis.

He also spoke of night neuralgias, mentioning a case in which peculiar distressing pains attacked the limbs after he had gone asleep. He would wake up, walk about the room, and when the pains passed away, go to sleep, to be again disturbed in the same way. He also described peculiar sensory shocks, which some experienced upon going to sleep. One in whom a peculiar feeling would pass from the hands up the arms to the head, when he would hear a loud crashing noise, like the breaking of a number of panes of glass. This was accompanied by a flash of bright yellow light. By getting up, or by moving over on his right side, he could prevent the progress of the attack. If, however, the feeling passed up to the neck he could not check it. These sensory are different from epileptic attacks, as the latter take place in the waking stage.

Jerking movements on going to bed are common. There are cases in which the jerkings are so severe as to require treatment.

Dr. Folson then read a paper on "Insomnia," giving its various causes, and their respective treatment. He advised trying all known methods of relief before resorting to sedatives. He preferred giving small doses of sedatives frequently repeated.

Dr. Mitchell stated that in some cases it was better to procure sleep at once by giving a large dose of a reliable sedative, such as sulfonal. In such cases the disordered functions of the body became more easily restored after a sleep was procured.

Dr. Wharton Sinkler read a paper on "Recent Observations in the Etiology and Treatment of Migraine." He spoke of some of the reflex causes of migraine, such as eye-strain, uterine disorders, nasal irritation, etc. He spoke also of its frequency in children, especially when the permanent teeth were coming through the gums. He spoke of the therapeutic agents, antipyrin, phenacetine, eucalyptus, and caffeine. He used phenacetine in preference to antipyrin, as it was safer and more reliable.

Dr. Ernst, of Harvard University, presented a specimen of a rabbit which had died of tuberculosis of the bowels. Six weeks before, eight drops of suspected tubercular milk had been subcutaneously injected in the abdominal region.

He also exhibited some results of Dr. Martin's work in his investigation of small-pox and vaccination. It would appear that the bacteria of the latter have been successfully isolated, cultivated, and re-innoculated. Further developments will be looked for with interest.

Dr. E. O. Shakespeare discussed the subject of the prevention of tuberculosis. He concluded his paper by stating the following general principles, which underlie an efficient system of prevention of tuberculosis.

1. From the standpoint of the already diseased, effective preventive measures should look to the rapid destruction of the tubercle bacilli in excretions and secretions of the affected, by little as possible prolonged close association of the well with the sick.

2. From the standpoint of those liable to become infected, nothing which may contain the living tubercle bacillus should be permitted to enter the digestive apparatus. Rigid inspection of meat and milk is a necessity.

3. Tuberculous subjects should not be admitted to hospital wards in which those with other diseases, especially of the lungs, are confined. In general hospitals, consumptives should be assigned to special consumptive wards.

4. Special hospitals for the treatment of consumption should be established.

In the morning session of Thursday, Dr. Kinnicutt read a very valuable paper on "Methods of Diagnosis in Diseases of the Stomach." He spoke of the importance of chemical examination of the contents of the stomach, as an adjunct to other means of diagnosis. In his opinion, the presence of free hydrochloric acid in the gastric juice was sufficient to exclude cancer. He then described the various tests for the presence of free hydrochloric and of lactic acids, and afterwards took up the differential diagnosis between cancer, ulcer, and hypersecretion.

In the discussion which followed, Dr. Forscheiner spoke of the great difficulty of making tests of the gastric juice in private practice.

Dr. Kinnicutt did not think these tests would present much greater difficulty than those of a qualitative and quantitative character of the urine.

Dr. Graham then read a paper entitled "Notes of Two Cases of Acromegaly," after which the session closed.

MITRAL STENOSIS.*

BY A. M'PHEDRAN, M.D.

Lizzie D., aet. 39, married. A small spare woman of most irascible temper. No reliable account could be obtained as to either her family or personal history. She gave no account of a decided attack of rheumatism, but said she had suffered from pains. There is no certainty of her having had measles, scarlatina, etc. She had been in the hospital many times during the last few years. During that time she had more or less cough, some shortness of breath, with a "wheezy" voice. She complained of pain in the præcordial region—it may have been feigned. Her complexion was clear with a pink hue to the cheeks and lips. The lungs, to examination, gave negative results.

The heart, two years ago, presented the following conditions:—On inspection there was nothing unusual to be seen. On palpation there was a marked systolic thrill over the apical region. The apex beat was felt in the normal position and slightly diffused to the right. To percussion the area of cardiac dullness was not altered. On auscultation there was a loud rough presystolic murmur heard over a circular space in the apical region, loudest in the centre of the space, which was a little to the right of the normal seat of the apex beat. The first sound of the heart was short, resembling the second sound in character; both were audible at the apex. There was accentuation of the pulmonic second sound heard to left of the sternum in the second interspace.

During the following winter (1888-9), she came under observation again. By this time the thrill was much less marked, and often absent. The murmur was not so harsh or loud, and was now followed by only one sound of the heart, so that, by some, the murmur was thought to be regurgitant now, followed by the second sound. But by carefully auscultating above the apical region over the fourth costal cartilage, the two heart sounds became distinct, and by moving the stethoscope a little downwards the murmur became audible, and at the same time the second sound was lost; with care, however, a point could be found at which both the murmur and heart sounds could be heard. The pulmonic sound was still accentuated, while the aortic was weak; owing to weakness of the latter it could not be heard at the apex.

Her condition otherwise was but little altered.

Last winter she entered the hospital again. She had married and was pregnant about five months. She was weaker and the breath shorter, with more cough and expectoration, but no blood. There was some œdema of the feet and legs. Urine was normal.

There was no thrill at the apex. The murmur was much less harsh, but still terminated abruptly before the heart sound, that followed it. The two sounds of heart were audible over the middle and upper parts of the præcordial region, but only the murmur and one sound at the apex, and that sound was short and sharp like second heart sound.

The pulmonic sound was less accentuated but still much sharper than the aortic sound, which was much weaker than normal.

As pregnancy advanced, the dyspnœa, cough, dropsy, and weakness increased; the urine became highly albuminous. At times no murmur was audible, only the first sound being heard at the apex. By April 15th, being then about eight months pregnant, her condition became so critical that it was deemed necessary to induce labor, and she was transferred to the care of Dr. A. H. Wright for that purpose. Matter progressed favorably; she was in fair condition just before the head was delivered, the pulse being about as good as usual. Immediately after delivery of the child no pulse could be felt; she sank rapidly and died shortly afterwards.

At the post-mortem examination, which was performed by Dr. J. Cavén, the lungs were found extremely œdematous, greatly fibrosed, and to contain many recent hæmorrhagic patches. The heart: the right auricle greatly dilated and filled with recent clot; the right auriculo-ventricular orifice narrower than normal, only admitting the ends of two fingers; the right ventricle somewhat dilated, with thickened walls; in its walls, near the pulmonary orifice, was found a large sinus extending to the left into the tissue of the left ventricular wall, and terminating in

* Read before the Pathological Society of Toronto.

two blind cul-de-sacs, the whole lined by smooth membrane.

The left auricle was much dilated and its walls thin. The mitral orifice was much contracted, the valves thickened and adherent, forming a funnel the apex of which formed a narrow oval slit about half an inch in length. The edges of the slit were approximated by slight pressure, and were doubtless closed with each systole of the ventricle. The cavity of the left ventricle was small and its walls thin. The thickening of the endocardium extended from the mitral sigment of the aortic valves, which were slightly affected also, but competent.

The liver was "nutmeg," and very fatty, but not enlarged. Kidneys showed little change. In the uterus the placenta was still adherent. There was a fairly large clot in the vagina.

The cause of death was probably due to the sudden emptying of the uterus and the slight uterine hemorrhage, both combining to deprive the general circulation of more blood than could in her condition be spared.

Remarks: This case is fairly typical of the general course of mitral stenosis. The clearest conception of the history of a case of mitral stenosis is obtained by following Broadbent's plan of dividing the history into three stages, as given in his Harveian lectures (*Brit. Med. Jour.*, vol. 1, 1884, page 449). "In the first stage there are the presystolic murmur and thrill with more or less accentuation of the pulmonic second sound; its distinguishing mark is the presence of the second sound at, and to the left of, the apex." An apex murmur preceding the cardial impulse, followed by two heart sounds is almost pathognomic. At this stage there are few if any symptoms. "The second stage is marked by the disappearance of the second sound from the apex. At the same time, the first sound has gradually undergone a complete change in character and has become short, sharp, and loud, resembling an exaggerated second sound. Now, mistakes in diagnosis are easily made; the presystolic murmur, followed by a short, sharp, first sound is taken to be a systolic murmur followed by a loud second sound, and the disease is supposed to be mitral insufficiency."

This accurately describes the condition in the above case. Very few of the works refer to the disappearance of the second sound at the apex, yet it is a point of great importance not only in diagnosis but also in prognosis, which is much more grave in stenosis than in insufficiency of the mitral valves.

Normally, the second sound is always to be heard at the apex and to the left of it, and its disappearance in mitral stenosis is owing, (1) to weakness of the aortic second sound on account of the insufficient distension of the aorta by each systole of the left ventricle, and (2) to the enlarged right ventricle overlapping the left and preventing its coming into contact with the chest wall, thus the aortic sound is not conducted through to the ear.

In Broadbent's third stage the murmur disappears, and only the short, sharp, first sound is heard at the apex. In the case detailed above this stage was not fully developed. The thrill disappeared, the murmur lost much of its harshness, and on one or two occasions was not to be heard but it did not disappear for long. This is probably due to the fact that the termination was hurried by the pregnancy, without which life would, probably have been prolonged, it may be, for a year or two at least.

This is to be noted also, that the murmur in this case, even when softest, always terminated abruptly, and never had the prolonged character that characterizes a regurgitant murmur.

Selections.

RUPTURE OF THE HEART.—The man had been found dead on the railway with several fractures of the limbs and a scalp wound, but no fracture of the skull. No external sign or trace of injury to the thorax in front. A large portion of the sternum was detached from the rest of the skeleton and thrust down on the underlying viscera, all the costal cartilages being broken as well from the 2nd to the 8th. The pericardium and the pleura were found full of blood. At the apex of the right ventricle there was a large rupture; another great rent into the right auricle. There was no laceration, neither was there any blood-clot in the heart, nor any rupture of the valves or of the chordæ tendineæ. In the auricular appendix and the musculi pectinati there were a couple of small ruptures. In the back of the heart at the left auricle, in the

interval between the entrance of the pulmonary veins, there were two or three large lacerations. The left auricular appendix was ruptured; but the left ventricle was free of rupture, or of any lesion whatever. Clearly what happened was, that the heart being full of blood, pressure of the detached bone burst the whole of the three chambers.—*Bennett in Med. Press and Circular.*

DIASTASE OF MALT IN EXPERIMENTAL DIABETES.—At a meeting of the National Society of Medicine, of Lyons, M. Lepine related an experiment proving that the injection of diastase of malt into the blood is capable of diminishing enormously the glycosuria produced experimentally by oblation of the pancreas. A bitch in a state of inanition, whose pancreas had been removed, and which could be catheterized every half hour, had urine drawn off one hour after operation, and nearly 50 grammes of sugar per litre were found. Two hours after the operation there were 66 grammes per litre. Two grammes of diastase were now injected into the animal, the quantity of sugar was rapidly lessened; half an hour after less than twenty grammes were found; the quantity then began to increase again, and 2½ hours later the effect of the diastase had nearly passed off. This result is perfectly in keeping with the results obtained by M. Lepine in the case of a man in whom he had injected some diastatic ferment. Unfortunately the diminution of the glycosuria is but transitory, the injected ferment being soon eliminated.—*Lyon Medical, April 6th, 1890.*

SOME CASES OF EPILEPSY TREATED WITH SUCCESS BY COLD BATHS AND LARGE DOSES OF BROMIDES.—Dr. P. Glatz.—The author publishes four case of epileptic attacks very much improved, and even apparently cured, by the simultaneous use of the bromides and the cold douche, which had been recommended by Charcot in one of the cases in which bromides and other remedies taken alone had failed. Knowing how frequently relapses occur, he insisted that the patient shall employ the treatment during at least three months of each year. The douches should be in form of shower-bath of very short duration, lasting not longer than half a minute to a minute, and should be taken morning and evening. The bromides were under form of polybromides (? combination of bromides) of Charcot, from 60 to 120 grains daily, or simply the bromide of sodium, of which the dose did not exceed 135 grains daily.—*Gas. med. de Strasbourg, April 1890. Lyon Medical, April 27th, 1890.*

G. A. F.

EXTRAORDINARY EFFECTS OF NAPHTHALIN ON THE EYE.—A recent *Lancet* referring to some new observations by Dr. Kolinski points out that naphthalin, which has been coming much into use from the powerful effect on the micro-organisms which exist in the intestines in some kinds of diarrhœa, also possesses the property of producing changes in the nutritive power of the blood, thus being able to set up degeneration of the blood vessels. As the eye is one of the most vascular organs, it is one of the first to show any of the changes induced by interference with the nutritive property of the blood. Naphthalin, according to Dr. Kolinski, first causes small extravasations in the choroid, and in the ciliary body, then ecchymosis and white patches in the retina, and finally cloudiness in the lens and crystals in the vitreous humour. We may add to these remarks published by the *Lancet*, and in Van Grafe's *Archiven* (xxxv. 2), that it has long been known how much influence is exerted on the eye by disturbance of the digestive organs, and especially by affections of the liver, which may actually produce cataract, the latter disappearing when the liver symptoms are cured. We know also how strongly certain medicaments, such as santonine, morphine, hyoscyamine, etc., act upon the organ of sight. The Polish physician has done well to draw attention to the effects of naphthalin in this respect.—*Magazine of Pharmacy.*

PRIMARY CARCINOMA OF PANCREAS; EXTIRPATION, RECOVERY.—By Professor Rugge of Bologna (*Giorn, Internazionale delle Scienze Mediche*, 1890, February)—A very instructive case occurred recently in which the pancreas of a woman of Ravenna, 50 years of age, was completely extirpated. The patient came to the clinic of the author in Bologna, complaining of gastric uneasiness, want of appetite, anorexia, persistent constipation, and pains radiating from the epigastrium in all directions. On examina-

tion, a tumor was found in the region of the transverse colon, bounded by the navel and left hypochondrium. The tumor was somewhat uneven, hard and resistant to the touch. It measured 9¾ inches in the transverse, and 4 in the vertical diameter. Tumor was slightly moveable. Diagnosis was somewhat difficult, and the author diagnosed a probable retroperitoneal sarcoma. The patient asked for the removal of the tumor. Operation was performed on September 4th. Much difficulty was experienced on account of the many adhesions, and of the unusual softness and brittleness of the tumor. Finally the growth, which was recognized as the pathologically altered pancreas, was removed piecemeal. Careful microscopical examination revealed primary cancer of pancreas. The wound ran an unusually favorable course, and healing was rapid. The general condition of the patient improved from day to day; the appetite increased, and in spite of fact that patient received a mixed diet at her own request, there were no digestive disorders, and all former troubles disappeared. Commenting on this rare case of total extirpation of the pancreas without any infavorable after-effects on digestive process, the author expresses the belief that other glands must assume the functions ascribed to the pancreas, and that among these the principal are Brünner's and Lieberkühn's glands.—*Dr. Sterk of Wien-Marienbad in Med. Chir. Rundschau, April 15, 1890.*

G. A. F.

RESEARCHES ON THE USE OF LIPANIN AS A SUBSTITUTE FOR COD LIVER OIL.—By Dr. Demetrius Galatti (*Archiv. f. Kinderheilk. xi., Bd. i., Steft).* As a result of observations made in the polyclinic of Dr. Herz in Vienna, Galatti concludes that lipanin is superior to cod liver oil. Twenty-seven children between the ages of eight months and thirteen and a-half years were put under treatment. Working on the hypothesis that the therapeutic value of cod liver oil depended on the presence of free fatty acids Von Mering was led to substitute for cod liver oil, a mixture consisting of pure olive oil, holding in solution five to six per cent. of oleic acid. This is now prepared under the name of "Lipanin," by the wholesale firm of Kahlbaum in Berlin, and is well liked by children, on account of the absence of the peculiar smell and taste of cod liver oil, and of the unpleasant after-effects of that drug.

Galatti has come to the following conclusions as the result of his observations:

1. Lipanin is well liked by children.

2. In none of the cases observed was there any discomfort, nausea, vomiting or diarrhœa, following its use.

3. The gain in weight even among the poor, badly-nourished patients attending the polyclinic was marked and even surprising.

4. The appetite was markedly improved, and a desire for food was manifested, even by those who had suffered from complete loss of appetite.

5. In patients suffering from tuberculosis the pulmonary lesions either remained stationary or progressed in spite of the improvement in the general condition. Lipanin may be taken even in summer, and young children should begin with two to three teaspoonfuls per day, gradually increasing to as many dessertspoonfuls, taken preferably afterwards. Older children might take as many tablespoonfuls. In rickets, Lipanin might be combined with phosphorus after the formula of Kassawitz, with cod liver oil. In the same way, if indicated, it could be combined with creasote or menthol.—*Dr. Heigenberger Budapest in Medicinisch Chirugische Rundschau, April 1st, 1890.*

G.A.F.

DIABETES MELLITUS AND PANCREATIC AFFECTIONS.—In the *Med. Chirug. Rundschau* for April, 1890, attention is drawn to an article in the *Berliner Klinische Wochenschrift*, from the pen of Dr. Minkowski, of Strassburg, in which the author considers the relations existing between diabetes mellitus and affections of the pancreas. He shows that while in post mortem examinations of diabetic patients, affections of the liver are practically never found, and lesions of the medulla oblongata only in rare cases, serious disease of the pancreas is, on the other hand, often met with. The author thinks it is no longer open to doubt, that at least some cases of diabetes are due to a primary lesion of the pancreas, but he suggests that we should advance from this position, and ask whether all cases of diabetes do not depend on some affection of the pancreas.

The writer maintains as specially worthy of consideration in this connection the fact that, in cases of extirpation of the pancreas, all the sugar taken in with the food is excreted in the urine. This fact, he observes, points to a specific function of the pancreas possessed by no other organ; that it renders probable the theory that every interference with the destruction of sugar in the organism answers to a disturbance of this specific function of the pancreas. He is inclined to give the more weight to this view, as all other views, according to which the cause of the disease would depend on lesions in other organs, have much less foundation than that which makes it depend on a disease of the pancreas. He admits that, in some lesions of the nervous system, sugar is present in the urine, but he suggests that in these cases the action may be an indirect one, as the sugar molecule is certainly not destroyed in the nervous system, although the nervous system may influence those organs by which sugar is utilized in the organism.

The organs on which attention has been nearly exclusively directed in this connection are the liver and the muscles. Dr. Minkowski says there is only one fact in favor of the hepatic origin of diabetes, namely, the presence of glycogen in the liver. Beyond this, he says, neither clinical nor pathological observations, nor the results of experiments are in favor of this theory. As regards the muscles, we know that when active they produce carbonic acid; we know also that muscular exercise can lessen the quantity of sugar in the urine of diabetic patients; but the writer insists that never in the most diffused diseases, the most widespread atrophy, or the worst forms of paralysis of the muscles, is sugar to be observed in the urine. He compares the facts just mentioned with those that tell in favor of the pancreatic theory: the numerous pathological changes found in the pancreas of diabetic patients; the occurrence of true diabetes mellitus after the removal of the pancreas, the only method by which true diabetes has as yet been experimentally produced.

Two objections remain to be answered:

1. Excretion of sugar in the urine has not been observed in all cases of disease of the pancreas.

2. Changes in the pancreas are not observed in all cases of diabetes.

As regards the first objection, the writer observes, that partial removal of the pancreas is not followed by diabetes. If a small portion of pancreatic tissue is left, even though it be not in connection with the excretory duct, it is sufficient to prevent the onset of diabetes. In one case the author, by removing about nine-tenths of the pancreas, succeeded in producing a mild form of diabetes. The dog experimented on had no sugar in the urine as long as he was kept on a meat and milk diet; after a meal rich in carbo-hydrates, however, a considerable quantity of sugar appeared in the urine. In answer to the second objection, the writer says that it is not possible at present to form an opinion on the frequency of pathological changes in the pancreas in cases of diabetes mellitus, seeing that only in a small number of cases has sufficient attention been paid to changes in the pancreas in post-mortems on diabetic patients. He points out that an accurate microscopical examination is necessary, in addition to the macroscopical. He admits that, even when this has been done some cases will probably be met with in which no pathological changes will be found sufficient to account for the disturbance of function, and that lesions of the nervous system, toxic influences, disturbances of circulation, may bring on diabetes just as well by disturbing the function of the pancreas as by disturbing that of the liver. In order not to be misunderstood, the author states that he is far from holding as proved the pancreatic origin of diabetes. At present it is a possibility to which he points, but one which is supported by important facts. It is even possible that the function of the pancreas forms but a link in the chain of tissue-changes by which sugar is destroyed in the organism; and that as the chain may be broken by the removal of the one link, so it could be broken in many other places. It is by no means out of the range of possibility that by further researches a decisive conclusion may be arrived at, that glycosuria is the expression of a disturbance of the function of the pancreas, just as albemuria is the expression of a disturbance of the function of the kidneys.

The writer shows that the present dietetic method of treating diabetes could then be explained as an attempt to spare a diseased organ by making fewer demands on its disturbed functions.

Minkowski and Von Mering have tried to treat diabetes by mixing fresh pancreas with the food of the patients, but without any marked influence on the excretion of sugar. This, as the writer remarks, need cause no surprise, as it is not a question of the action of the pancreatic juice in the intestine, but as to the action of the pancreas as a factor in producing tissue changes.

G. A. F.

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, JUNE 2, 1890.

TRINITY MEDICAL COLLEGE AND THE UNIVERSITY OF TORONTO.

We had hoped that the time had come in the history of medical colleges in this Province when they could work side by side in friendly rivalry, without any of the disagreeable features which characterized their relations in times past. The perusal of an open letter from the Dean of Trinity Medical College to the Minister of Education, in March last, would tend to dispel any such pleasant illusions. We have not space for this extraordinary production, which uses such terms as "traps," "utter meanness and gross unfairness," "sly and underhand character," "tortuous policy," etc., with reference to the new Faculty, its methods of formation, and its present position; but will simply say the main object of the letter is to show that Trinity has been badly treated. In connection therewith we desire to give a plain statement of facts, and leave the profession of Ontario to form their own conclusions.

Under the Federation Act, passed by the Provincial Legislature, power was given to the Senate of the University of Toronto to re-establish and conduct a Medical Faculty. A committee of the Senate was appointed to consider the matter, composed as follows: The Vice-Chancellor, Sir Daniel Wilson, Sir Matthew Cameron, Hon. Justice Patterson, Hon. Justice Falconbridge, Rev. Principal Caven, Rev. Father Vincent, Hon. John Macdonald, Professor Galbraith, Dr. O'Sullivan, Mr. W. A. Foster, Q.C., Mr. C. Moss, Q.C., Mr. Wm. Houston, M.A., Drs. Fulton, Oldright, McFarlane, and A. H. Wright. The committee decided that it was desirable to re-establish a Medical Faculty in the University, and showed a strong desire to obtain the sympathies of the profession as a whole, and especially the assistance of the two schools of Toronto in such establishment. In their report, presented to the Senate March 21st, 1887, we find the following sentences: "If the Faculty or Faculties of the Toronto School of Medicine or Trinity Medical School, Toronto, decide to suspend their charter or charters, and accept the proposed scheme, the members of such Faculty or Faculties shall hold, as far as possible, the same positions in the new college as they held as professors or lecturers in their present schools." "The present salaries of professors shall be maintained *pro rata*; and for the purpose of defining what is understood by salaries, the scale at present existing at Trinity Medical School shall be taken as a basis; and a practical scheme for retiring allowances for the professors shall be arranged." This latter clause was inserted for the purpose of overcoming certain objections raised by Dr. Fulton in the interests of the school he represented. Every effort was made to enlist Trinity's active co-operation in the organization of a combined Faculty, whose aim would be, not simply to attract large numbers into our already over-crowded profession, but chiefly to raise the standard of medical education in the Province.

This report was formally submitted to the Trinity Faculty for approval. The official reply stated that the report had been "very carefully gone over section by section, and after mature deliberation" it was decided that the "Corporation of Trinity Medical School is not willing to suspend its charter, and enter into the scheme proposed." Many reasons were given to show the causes for refusal to co-operate. In one of the Dean's letters, we find the following concluding sentences: "I think it will be ample time to give the subject full consideration when

we learn that the Government of Ontario, with the cordial co-operation of our Provincial Legislature, has fully decided to create, equip, and endow liberally a new medical teaching body, and to provide for it a staff of the best teachers the country can furnish, each of whom shall have a salary secured to him of not less than $2,000 a year for each of the principal chairs, and a suitable retiring allowance when, from age or ill health, he is no longer able to discharge his duties. Till this is done, the project is a mere 'castle in the air.' When it has assumed this tangible form, I feel quite sure Trinity Medical School will accord to it a most careful and respectful consideration."

Thus we find that, according to Trinity's views, after carefully considering the report, the principles involved in the formation of the new Faculty were entirely wrong; but, at the same time, its professors were willing to sacrifice their principles for the small sum of $2,000 a year each.

Trinity's Dean, in his open letter, says: "Indeed, for reasons which need not be detailed here, not a few members of the Faculty, who knew all about the *proposal* and its *origin*, considered it a mere trap, falling into which would have destroyed the identity of Trinity Medical College." A charge so serious as this must be simply astounding to those who have any intimate knowledge of the various stages of the negotiations. We hope that a careful review of the the names given will furnish a sufficient guarantee that this committee could scarcely condescend to such a procedure as laying a "trap" for the purpose of deceiving Trinity. Some of its members, whose memories we revere, have died; and we consider it singularly unfortunate that their fair names should be subjected to such slanderous accusations.

We would like to know by what authority the Dean presumes to speak of the "independent Medical Colleges" outside of Trinity as hostile to the University of Toronto, and struggling against a "grievance," an "evil," "a great wrong, and all the greater because of its sly, underhand character," etc.? Who is he that now poses as the champion of medical colleges in distress? It singularly happens to be the man who, acting on behalf of the Trinity Faculty, attempted to destroy the Kingston Medical School when its students were in open rebellion against the authorities, during the session of 1882-3, by offering to take those students and give them full standing on their own declarations. McGill had previously refused to do so dishonorable an act. So grateful did the Kingston Faculty feel towards McGill that two of its professors went to Montreal (as the Hon. Dr. Sullivan publicly stated) "mainly to show their appreciation of the honorable and upright manner in which the Medical Faculty of McGill University had acted." How they felt towards Trinity may be inferred from Dr. Lavell's statements as they appeared in public print, to the effect that they "were left to to the unpleasant consciousness of feeling that they had been betrayed, and their confidence in the honor of a sister institution was shaken."

In view of this unfortunate episode, unparalleled in the annals of medical education in Ontario, it would certainly be a strange spectacle to see Queen's yoked with Trinity in a crusade against higher medical education. But, apart from this particular incident, we believe there are in Queen's a solid respectability, a sturdy honesty, and an unselfish desire for the general good, which will ever prevent her from engaging in the petty methods of warfare inaugurated by Trinity. Of that vigorous and worthy young medical college in the west we have nothing to say in this connection excepting that she will probably leave the Dean very severely alone, and that nothing is likely to destroy the good feeling and kindly friendship that has ever existed between London and Toronto.

After all, so far as we know, apart from this peculiar and rather hysterical attack on the part of Trinity, there is a general disposition to give the University a fair and impartial support. It is unfortunate that any opposition to it should arise from a sister so near her doors. The University of Toronto appreciated Trinity's high standing, and the good work she had done, and paid her the highest compliment possible in offering her a place second to none. There were many things for the Toronto and Trinity Schools to consider. The disadvantages from their point of view were numerous, and have been referred to before. One of the advantages which the Dean attaches much importance to is the fact that the fees from students for chem-

istry and biology go into the Medical Faculty fund. We presume the Senate can place them where it likes; but supposing the statement to be correct, as we hope it is, what is the remedy? Two alternatives are proposed: 1st, the students in medicine should not be charged for these subjects. In such a case the Medical Faculty would have a decided advantage over other schools which would hardly satisfy even Trinity; 2nd, such fees should be placed in the general funds to be expended for the benefit of the Arts Department. As it is now the Arts Department is supported by the country, while the Medical Faculty has cost the Government nothing. Is it just that the Medical Faculty, the only portion of the University which is self-supporting, should be asked to subsidize the Arts Faculty? The idea that medical students should pay certain fees merely for the purpose of assisting in the education of the arts' men is rather a brilliant one, and possibly worthy of careful thought and consideration; but, for that purpose, time fails us at present.

Trinity thought that the disadvantages predominated. Her answer was eminently business-like: we will not accept, but just try us with an offer of $2,000 each, and we "will accord to it a most careful and respectful consideration." They had a perfect right to refuse, but why should they prevent others from accepting? Surely they were too dignified to pursue a dog-in-the-manger policy! Well, at first they were, and treated the Faculty with a proud and haughty disdain. Then they fired their shafts of wit. The course was "too scientific." There was too much "frogology." The Faculty was an "unwieldy invertebrate thing—principally composed of tail." At this stage the Dean was really almost too funny for anything. Finally, after passing through various phases, wit gave place to fear. The third session after the re-establishment showed a degree of success which was as unpleasant as it was unexpected. Trinity appears to be displeased with the results, and, as a consequence, has made, probably, the most remarkable and ill-judged attack on the University of Toronto that that institution has ever experienced. Fear was accompanied by a well marked hyperæsthesia and general hysteria, and finally we find Trinity's Dean standing, almost alone, in the valley of despair, gazing excitedly on the wave of progress which threatens to swallow him, while he frantically calls upon it to stop—but it won't stop.

THE REGISTRARSHIP OF THE ONTARIO MEDICAL COUNCIL.

The work connected with the registrarship of the Ontario Medical Council has been enormously increased during recent years. The able and popular incumbent, Dr. Pyne, has always proved equal to the occasion even under the most trying circumstances. His honesty, zeal, tact, and perfect impartiality, are universally recognized. It is quite within the mark to say that the success of the Council is largely due to his patient and untiring efforts. Is it not time that his labors should receive something like a decent recognition? We understand he is now receiving the beggarly salary of $1200 per annum. It ought to be $3000. A good officer should be, at least, fairly well paid. We feel certain the profession would support the Council in giving an increase something like the one suggested. Let justice be done as soon as possible.

NOTES.

BRITISH COLUMBIA MEDICAL COUNCIL.—The annual meeting of the British Columbia Medical Council was concluded May 8th. The following officers were elected for the ensuing year: Dr. Hannington, of Victoria, President; Dr. W. A. DeWolf Smith, of New Westminster, Vice-President; Dr. Lefevre, of Vancouver, Treasurer; Dr. G. N. Milne, of Victoria, Registrar and Secretary. The Council decided to prosecute all unqualified practitioners. The following gentlemen have been appointed examiners: Materia medica and chemistry, Dr. Milne; physiology and clinical medicine, Dr. McGuigan; surgery, Dr. Davie; diseases of women and children, Dr. Lefevre; practice of medicine, Dr. Hanington; anatomy and clinical surgery, Dr. Tunstall; Medical jurisprudence, Dr. Smith.

Dr. W. Belfield, 612 Opera House Building, Chicago, Ill., U.S.A., respectfully solicits information concerning unpublished cases of operations upon the prostrate, especially for the relief of the so-called hypertrophy of the organ.

Meeting of Medical Societies.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated meeting, May 26th, '90.

Dr. Gaviller in the chair.

Dr. A. B. Osborne read a paper entitled,

SPECTACLES AS THERAPEUTIC AGENTS.

If "the proof of the pudding is in the eating," then the value of any therapeutic measure consists in its successful application.

The results—remote and direct—of strain upon certain portions of the ocular mechanism are being rapidly ascertained, and are becoming recognized by the profession. So far-reaching are the effects of ocular strain, that an examination of the eye is considered incomplete unless the state of the refraction and motor apparatus is fully noted, and many chronic inflammatory affections of the eyes become much more amenable to treatment when the ciliary strain is removed by glasses.

The constant occurrence of certain symptoms in cases of hypermetropia and astigmatism, as well as the equally constant relief to these symptoms afforded by wearing glasses, point at once to a strain of the ciliary muscle as the prime factor in their production.

Headache is one of the commonest manifestations of ciliary strain, in fact refractive errors are so productive of this disorder that every case of chronic or recurring headache should be tested for glasses. The headache may occur in almost any form but is most frequently frontal, accompanied by a sensation of weariness and a desire to close the eyes. It is rarely present upon first awakening in the morning, but commences during the day, or in the evening after the eyes have been in use for some time. Among school children who are compelled to study at night these headaches are specially frequent; a good night's rest usually removes the trouble completely, but only to return at the end of another day's work. The sufferer may be quite unaware of any defect of the eyes, as there are frequently no symptoms pointing directly to them and the vision may be excellent, in fact it is the proud boast of many such cases that their sight is perfect, yet a careful examination reveals an amount of hypermetropia, which when corrected affords a measure of perfect relief. It is not infrequent to be consulted by patients about headaches which are referred to a slight or purely imaginary catarrh, but are in reality due to the eyes and are cured by wearing appropriate glasses. The causal relation between ciliary strain and headache is proved by the disappearance of the latter when the former is relieved, but the direct chain by which such an effect is produced is difficult to trace.

Neuralgia, especially of the frontal nerve, but also of the facial and occipital nerves is not unusually the result of ocular strain, indeed such association is sufficiently frequent to call for an examination of the eyes in obstinate and recurring cases. This form of neuralgia is particularly prone to occur when the patient is somewhat run down, owing to the fact that the eyes are required to do their customary work, notwithstanding the fact that they are in the same weakened condition as the rest of the system. In these reflex neuroses, which are influenced, if not actually caused, by strain of the ocular mechanism, the neurotic condition, unless early relieved, may become a confirmed habit, making it much more difficult to eradicate. This is one of the strongest arguments in favor of an early optical correction. It is hardly necessary to remark that the symptoms so far enumerated are most apt to occur when the system is debilitated, so that invigorating treatment is indicated, as well as relief to the ocular strain.

The local effects of ciliary strain are numerous, fully two-thirds of an oculist's cases presenting themselves on account of, or as a result of, such strain.

The causation of cataract is probably one of the most direct results of ciliary strain. It has long been known that the majority of cases of cataract were hypermetropic, but it has been reserved for recent observers to begin at the other end of the scale and demonstrate incipient cataracts in a large proportion of cases of hypermetropia and astigmatism. The probabilities have long been in favor of such a theory, and recent observations appear to have established it as a fact.

A large percentage of squints are the outcome of ciliary strain, and many oculists can cite cases where—having seen the patient before the squint had become a confirmed habit—it disap

peared completely under the use of atropine and correcting glasses. Similarly, a simple surgical correction without the assistance of spectacles is too frequently a complete failure. So well known has this fact become that surgeons do not operate upon squints without first testing the vision and ordering the requisite glasses.

Chronic affections of the lids, as blepharitis and recurring styes, may be kept up by ciliary strain ; these cases recover rapidly when glasses are worn. This is also true of a chronic form of conjunctivitis, affecting principally the palpebral conjunctiva. The writer has found a considerable proportion of his cases of chalazion associated with hypermetropia and astigmatism, and the correction of these defects has materially lessened the irritation. Photophobia, lachrymation, and an apparent hyperaesthesia of the retina, may all be produced by strain of the refractive mechanism.

The hypertrophy of the ciliary muscle, resulting from the continuous strain necessary in hypermetropia and astigmatism, is an important factor in the production of glaucoma.

Lastly, the asthenopia produced by some forms of ocular strain is familiar to all ; it disappears rapidly after proper glasses are worn.

The large number of children wearing spectacles in the present day is frequently adduced as evidence of the deterioration of the species. It would be more correct to call this an index of the advance of science, inasmuch as we are now able to relieve diseases by means of glasses, which our predecessors were barely able to diagnose, much less treat.

From what has been said it will be seen that spectacles occupy a prominent place among our therapeutic agents, not only in relieving visual defects and in the treatment of some painful reflex symptoms, but also in diminishing the danger to eyes later in life from such serious diseases as cataract and glaucoma.

Dr. Lafferty read notes of following case :—

J. M., a laborer, aged 51, married ; has served in the British army for 11 years. Has, with the exception of small-pox 32 years ago, had no sickness of any kind. Drank very hard until about 12 years ago. During this latter period he has been a total abstainer. Family history good ; parents both lived to 80.

Never contracted any venereal disease ; in fact never required any medical attention until about four years ago, when he experienced a difficulty in micturating. The urine contained considerable quantity of white substance, milky in appearance. Had retention ; was delivered by means of a catheter. This deposit has gradually increased in quantity ever since, being almost constantly present. About this time pains began to be felt in the sacral and gluteal regions, darting and shooting down both legs to the heels. Little notice was taken of it ; was considered to be sciatica until in May, 1887 (3 years ago), there was a decided weakness in his lower extremities. The pain was more frequent and severe, and shortly after, while walking with a friend at night, fell down on the sidewalk and had to be assisted home by his companion. In August of this same year (1887), I was summoned to attend him ; found the patient in bed, complaining of pain in both limbs, especially in the calves. While lying on his back with his legs crossed, when endeavoring to change their position by lifting the top one, there would be a disposition for the lower one to move first. Has considerable difficulty in walking, in the dark stumbles from side to side. If walking during the day, cannot look back without first stopping, that is, he cannot look back over his shoulder and still keep moving forward. His tendency under these circumstances is to fall. Eyesight, good ; pupils equal, no arcus senilis, conjunctivæ normal. No evidence of paralysis ; has good power of muscles. Can stand steadily when eyes are open, but when asked to close them begins to sway back and forward and is quite unsteady. With closed eyes can place right index finger on tip of nose without any hesitation. The left is slower in movement, and does not find the nose so conveniently. Walks with a staggered gait, bringing the heel down with the toes.

Diminished sensation in both extremities.

Tendon reflex nil ; bowels very constipated ; appetite diminished and variable.

Describes a feeling of numbness most noticeable in right leg and foot, a sense of constriction about the body as if a rope was tied around him above the hips.

Urine somewhat increased in quantity, very slight trace of albumen, no sugar, sp. gr. 1022, turbid and alkaline. After micturating a light

creamy deposit was frequently passed. Sexual powers normal. Pulse 65; weighs 160.

Diagnosis: tabes dorsalis - non - syphilitic. Ordered rest in bed, liberal dose of castor oil, as bowels had not been moved for 4 days. Fl. ex. calabar bean 2 gr., four times a day.

Aug. 21st. Bowels moved thoroughly, feels much more comfortable.

Sept. 2. Allowed up. Pains slight, appetite good, sleeps well. Takes pulv. glycyrrhizae co., every alternate day.

Oct. 15th. Retention, relieved by catheter. Complains of a fatigued feeling generally, marked numbness in both legs. Pain increased. Has to use a cane to steady himself when walking at night. Ordered pill argentum nitrate ¼ gr. 3 times a day, in addition to previous prescription.

Nov. 20th. No improvement. Thinking that owing to his military career and previous intemperate habits there might possibly be a specific cause, pot. iodide was given (in gradually increased doses). This drug produced gastric disturbance and was intolerable at times, and hence discontinued it after a trial of a few weeks, and substituted fl. ex. calabar bean M; with 4 minims of ac. phos. dil. 4. i.d.

Aug. 30th, 1888. Galvanism has been systematically used for last two months. The pains are somewhat relieved by its use. Walks very slowly, assisted by a cane, dare not venture out at night alone. Occasional doses of morphia have to be administered to relieve pain. Greater loss of sensation in lower extremities; numbness extends higher up the waist. Complains of tightness from the ribs down. Slight numbness in right arm. Sensation in soles of feet when walking, as though stepping on a spongy material. On pinching the neck the pupils do not respond by dilating as is seen in normal subjects. Power of co-ordination much lessened; in fact the conditions present a year ago are now greatly exaggerated. Prescribed syr. trip. phos. 3 ter in die.

May 1889. Is so much disabled as to be unable to get out. Goes around the house with a crutch under each arm. Pains in the lumbar region and down both legs very troublesome. Says stiffness and tightness has become worse. Sensation leaving right arm and shoulder. Can remove the hair from his arms without feeling it. Left arm normal.

Is now given Sayre's apparatus, which is attached to the ceiling. By means of this he is to be raised off his feet once a day and allowed to hang five minutes each time. When raised, he described the sensation as if being pulled apart. Could feel the spine, as if it were separating. Found almost immediate benefit, pain and stiffness being relieved. Bowels began to move without purgatives, and four weeks after walked from the street car into my office, the only assistance being a heavy cane.

Aug. 1889. Went to Toronto on a visit for a month, using Sayre continually, taking syr. trip. phos., and still improving.

Dec. 1889. The pain, stiffness, etc., has again returned, although he has persevered with the treatment recommended. Is forced to use the crutches once more. Has lost all sexual desire and power. Urine is now clear and normal. Muscles do not respond to a very strong faradic current. Sensation in legs almost entirely gone. Can strike them with a heavy stick without feeling it, as he puts it, "they are just like a board." Loss of sensation extends over upper right half of body, limited by clavicle and scapula above, and the median line before and behind.

April, 1890. General condition much the same as in December last. Sayre's apparatus is of no benefit to him now, further than some temporary relief for an hour or so. Has taken nothing in the way of drugs for the last three months, except an occasional half grain of morphia as may be found necessary.

NEW YORK ACADEMY OF MEDICINE. SECTION ON ORTHOPÆDIC SURGERY.

Stated meeting, April 18th, 1890.

V. P. Gibney, M.D., Chairman.

HEMATOMA OF THE STERNO-CLEIDO MASTOID MUSCLE.

Dr. A. B. Judson presented a patient, four and a half weeks old, who had been referred to him as a case of congenital torticollis. There was a long fusiform tumor in the course of the muscle, the hardness of which suggested a short and fibrous sterno-cleido mastoid. There was, however, but little shortening, and no wry-neck. The condition was supposed

to be the result of injury to the muscle in parturition. Dr. B. E. Hadra, of Texas, had reported two cases which had been relieved by tenotomy, and Dr. F. D. Brooks, of New Hampshire, had followed with a report of three cases, which had recovered by expectant treatment, or the use of friction and local applications. In the present case, a favorable prognosis had been given without special treatment.

A NEW BED FOR USE IN HIP DISEASE.

Dr. A. M. Phelps presented a little girl with hip disease, who had been treated on an improved surgical bed, which was also exhibited to the section. When she came under his care, there was flexion nearly to a right angle, adduction, sinuses, and an abscess, and the liver was already enlarged. His improved bed consisted of the ordinary iron bedstead found in hospitals, to which was added a convenient arrangement for the application of traction. The iron bedposts at the foot of the bed were continued upwards much higher than those at the head. An iron cross-bar slid up and down on these footposts, and could be fastened at any height, so as to make traction at any angle desired. This cross-bar carried a pulley, which could be adjusted laterally so as to make traction directly in the line of deformity. The side-bar of the bedstead was also fitted with an adjustable pulley for the purpose of making lateral traction. This apparatus cost about five dollars, and could be supplied by Reynders, either with or without the bedstead.

The patient whom he exhibited had been treated by traction in this bed; but this was not sufficient to overcome the deformity. Under chloroform, the tensor vaginæ femoris and fascia lata, the adductors longus and magnus, and the contracted anterior border of the glutei muscles and the rectus femoris, were divided. Traction with a weight of eight pounds was then applied in the line of the deformity, and a force of two pounds at right angles to this. After two months, the deformity had been for the most part reduced, and his splint, with crutches and a high shoe, were then applied to prevent relapse, and they would be continued until the case was cured.

Dr. R. H. Sayre presented

A CASE OF CONGENITAL LOCK-JAW.

No definite history could be obtained concerning this boy, except that he was five years of age, and that nothing unusual had been noticed about the jaw until a short time ago. The boy was quite intelligent, and no other joints were affected. The jaw appeared to be subluxated backwards, and the deformity was presumably congenital. The recession of the jaw, and the apparent atrophy on both sides, added to the interest of the case. Dr. Sayre said that before adopting any operative measures, he would attempt to relieve the case by stretching; and for this purpose would employ a wedge-shaped instrument, devised by Dr. L. W. Hubbard, and presented last year before the society of the Alumni of Bellevue Hospital. It consisted of two plates of steel, fastened together by a separable hinge, and capable of being separated at the other end by turning a screw. Having partly separated the jaws of the instrument, a cork could be inserted between the plates near the hinge, and the action of the screw reversed, when the instrument would exert considerable pressure on the molar teeth.

Dr. W. R. Townsend presented two cases of

RACHITIC POSTERIOR CURVATURE OF TIBIÆ.

He said that the dispensary records showed that about two years ago there was a well marked knock-knee and rachitis in one case, who returned last week with the present peculiar condition of the tibia. Since then, the other case, with a similar deformity had come under observation. The latter case presented an increased growth of one portion of the tibia, amounting almost to an exostosis. It also showed a well marked "rachitic rosary." Macewen had called especial attention to these secondary bone formations on the inner side of the knee in cases of knock-knee. The posterior curves of the tibia were rarely seen, these being the only cases met with during the past two years at the Hospital for Ruptured and Crippled.

Dr. S. Ketch reported a case of

RHEUMATIC (?) ARTHRITIS OF KNEE.

On July 3rd, 1888, he was asked to see the following case in consultation with Drs. Lawrence Johnson and N. J. Hepburn:

E. S., single, 22 years of age, having a good family history, had been perfectly well up to the present illness, and denied having had any venereal disease; an examination of the urethra failed to show the presence of a urethritis.

Early in May, 1888, he had a slight attack of what was considered to be rheumatism, in the left elbow and the right thumb, which left these joints in a few days, and lodged in the right knee. No other joints became involved; but he grew steadily worse under treatment for rheumatism, and emaciated rapidly after the involvment of the knee. When first seen by Dr. Ketch he presented the facies of extreme suffering; the knee joint was flexed beyond 90°, and was very much swollen, and excessively tender; there was manifest atrophy of the thigh and calf; pulse, 120; temperature, 103·5° F. He had had no chill. Anodynes were constantly required, and his general health was failing rapidly. The urine was abundant, and was free from albumen. Urates were in excess. The acute symptoms continuing unabated after the constant application of ice, and the administration of morphine and the salicylate of soda for several days, the patient was etherized on July 12th, and the knee straightened with as little force as possible. Adhesive plasters were applied from below the knee to above the malleoli, and plaster of Paris over this with reinforcements with steel bars, the joint being left exposed. The limb was elevated, the ice-bags applied to the knee, and traction made in a straight line by a weight of ten pounds. This was followed by speedy relief, and a reduction of the temperature to 100° F. On the following day the swelling had greatly increased, but the limb could be handled quite freely. The joint was firmly bandaged, and the ice continued. On July 16th, Dr. Gibney saw the patient, and advised a continuance of the treatment regardless of the swelling. The patient did not then require anodynes; appetite was improving, and the temperature had fallen to 99° F. Ice-bags were continued during the month of August, and the local tenderness diminished more rapidly than the pain on motion. When the splint was removed early in October, there was scarcely any motion at the articulation, and the joint could be freely handled without complaint. A retention splint was applied, and the patient allowed to go about on crutches. In April, 1889, the anchylosis was complete, and he was enabled to return to work. He could at present walk long distances without fatigue, and his general condition was good. The chief points of interest in the case were regarding the etiology and the treatment. He believed that there were cases of rheumatism like this one in which the rheumatic process was modified or entirely changed in character. The presence of a poison in the system was undoubted; but it was remarkable that it should have been so mild at the time the elbow and thumb were attacked, and then have become so concentrated in the knee joint as to practically destroy it. Rheumatoid arthritis was usually a chronic process involving numerous joints, and eventually crippling them; but such a process was not found in the present instance. The subject of treatment was important as bearing on the treatment of joints, affected with rheumatism; and he was positive that his case would have resulted in a bad deformity, if he had not in the beginning of his treatment, secured a good position of the limb.

DISCUSSION.

Dr. Gibney had seen a great many cases of hæmatoma of the sterno-cleido mastoid muscle, and they invariably got well. He had often wondered whether in some cases of congenital torticollis, actual shortening of the muscle had not been caused by long continued holding of the head in one position, necessitated by the presence originally of a large hæmatoma. In these cases of hæmatoma, there was probably laceration of some of the muscular fibres, with escape of the blood into the sheath, or into the muscular tissue itself.

Dr. N. M. Shaffer said that he had made measurements of the length of the sterno-mastoid muscle in these cases, as well as in normal cases, and his observation showed that there was an arrest of development in the affected muscle, which suggested a possible central lesion, involving the spinal accessory nerve. These cases might arise from traumatism; but unless the destruction of muscular tissue was very great, it would not account for the total arrest of growth.

Dr. Ketch thought that the existence of some deformity in Dr. Phelps' case, after such extensive division of the muscles, showed the fallacy of depending altogether upon dividing muscles for the rectification of the deformity of hip disease. As long as the bone disease was active, and muscular spasm was present, deformity would return from this spasm, even after division of the muscles.

Dr. Shaffer also thought that division of the muscles offered only a temporary relief. He had frequently seen recurrence of the deformity after such a procedure in disease of various joints, and especially in cases of tetanoid paraplegia. An examination under ether would determine the amount of muscular resistance, and the breaking up of the intracapsular and extracapsular adhesions, together with subsequent maintenance of the straight position, were all that could be expected in the way of preventing ultimate deformity.

Dr. R. H. Sayre said that much less traumatism was inflicted by dividing the muscles first, rather than by trying to reduce the deformity with the muscles in a state of tension. Dr. Ketch's remarks simply emphasized the importance of proper mechanical treatment after division of the muscles.

Dr. Ketch said that if the reduction of the deformity could be accomplished effectually by mechanical treatment alone, he did not see the advantage of the operation. In answer to a question from Dr. Phelps, as to what he would do with a deformity which had not yielded after one year's treatment by traction, he said that such a deformity was probably due to intra-articular changes, and was independent of the muscles, and he would therefore prefer exsection or other bone operation.

Dr. John Ridlon wished to join the ranks of those who believed in rapid reduction of the deformity—slow reduction caused needless traumatism. In some cases the deformity could be rapidly reduced by mechanical means and without anæsthesia ; others required anæsthesia; and still others were not reducible even then. In this latter class the first indication was a division of the soft parts, and the second was to maintain the good position until a cure was effected. The average case of flexion through an arc of forty-five degrees, required from twelve to eighteen weeks of treatment with the traction splint, for its reduction ; and the advocates of the traction splint had just confessed that the deformity would recur after such treatment. The deformity should be overcome in at least a fortnight. Thomas' hip splint would keep the leg straight, and prevent flexion, adduction, and abduction.

Dr. A. B. Judson had not found that the muscles seriously interfered in the acute stage of the disease, with the reduction of the deformity, and he considered that the reduction could be effected by slow and painless methods, without any harm to the patient. The difficulty in overcoming the deformity was a purely mechanical one, arising from insufficient leverage—only the short distance from the acetabulum to the crest of the ilium.

Dr. Phelps, in closing the discussion on his case, said that the muscles were not divided to overcome reflex muscular spasm, but to overcome deformity ; and in obstinate cases of long standing, like the one just presented, this was a safe procedure ; while excision of the hip joint was a serious one. He had not wished to cut the muscles more deeply, and the deformity, although not completely reduced at the time of the operation, in October, was being constantly diminished by the treatment employed. Statistics showed that a very small percentage of cases, treated solely by mechanical means, recovered without deformity ; and, therefore, a resort to operative methods in a certain class of cases, and subsequent mechanical treatment, offered better hopes of success. He would be sorry to cut a tendon, and have the case relapse—it would indicate improper treatment. He did not believe in trying to overcome the deformity by Thomas' splint, or any other. During the treatment, in order to get proper leverage, and hold the patient quiet, a long splint was applied to the well leg, extending to the axilla, and the body, limb, and splint enveloped in plaster of Paris. No splint could overcome the deformity, or possibly prevent it, which did not pass up on to the thorax. The idea of allowing the patient to walk upon a splint, or upon the diseased limb, was a heresy which we would eventually renounce. The patient, in his opinion, should use crutches, and he thought that Thomas struck in the right direction ; but the splint should be fitted to the patient, and not the patient to the splint. Extension in a line with the axis of the neck of the femur was also necessary to relieve intra-articular pressure by overcoming the contraction of the adductor and abductor muscles.

Dr. Judson thought the physiognomy of the case of partial anchylosis of the jaw was one of arthritis, and the deformity was directly due to the inability to use the jaw, and was not the re-

sult of the peculiar shape of the bone. Operation seemed much more successful than the stretching process.

Dr. Phelps concurred in this opinion, and added that in his experience, good results had followed resection of one of the temporo-maxillary articulations, as anchylosis was usually found only in one articulation. An incision, one and a quarter inches long, was made along the zygoma, and the articulation exposed, Chiseling away the articular surface, was all that was necessary to cure the case. His cases had presented evidences of arthritis. The anchylosed joint was also on the side of non-development.

Dr. Shaffer remarked that if he had not heard the history of the case, he would have supposed that the patient had Pott's disease and had been treated with an apparatus in which the chin-piece had been forced too far backward. He thought there was much rigidity on both sides of the jaw. If the parts relaxed under ether, the evidence would be in favor of arthritis; but if not, it would indicate a permanent contracture, and would demand operation.

Dr. Gibney said with reference to the case of posterior deformity of the tibia, that nothing but an osteotomy would correct the deformity. While under ether, the operator should endeavor to bring the fragments nearly into line, and then apply retentive apparatus. Subsequently, a supra-condyloid osteotomy would be needed. By doing a Macewen's or a Macormac's operation, the subsequent dressings would, in great measure, correct the the antero-lateral curvature. He had frequently seen this occur, sometimes to a marked extent. It was possible that the long rest in bed might have made the bone more yielding.

Dr. Shaffer thought that the case of arthritis, presented by Dr. Ketch, answered very well the complete description given by Niemeyer, of arthritis deformans. He considered this nothing more thon chronic articular rheumatism, and he had seen it both with and without high fever. It closely resembled gonorrheal rheumatism, even in cases where gonorrhea could be absolutely eliminated.

Dr. H. W. Berg said that he had seen a case of gonorrheal rheumatism of the ankle joint, which was quite thoroughly anchylosed, and did not recover its function for nearly two years. In such cases the lesion affected chiefly the soft parts, the inflammatory products binding down the tissues so firmly that the joint was virtually anchylosed.

Dr. R. H. Sayre had seen a severe case of arthritis similar to the one presented. After confinement to bed for eight months, suffering from severe pain and high fever, the knee joint seemed to be absolutely anchylosed, and the patella immovable; but vigorous and persistent massage had secured, after about one year, pretty fair movement. The fact that the joint, in the case presented, was a little tender, was in favor of the anchylosis not being complete; for the tenderness arose from the pain caused by an almost imperceptible motion of the joint. Persistent and careful efforts at moving the knee joint, not sufficient to cause pain many hours, would probably give the patient a movable joint.

Dr. Judson called attention to the admirable position of the limb, remarking that a perfectly straight limb was much more stable than one bent at ever so slight an angle. These cases of stiff knee should wear a "lift" on the shoe of the well side, to enable the stiff knee to readily swing past the other, and so avoid awkward tilting of the pelvis at each step.

Dr. Phelps thought that in Dr. Ketch's case there was a fibrous anchylosis, and that, by breaking this up, motion could be secured. In one such case, while forcibly reducing the deformity, the femur was fractured without the exercise of much force; and he called attention to this, because after prolonged rest in one position, the bone frequently underwent fatty degeneration, sometimes only a shell of bone remaining. Union of the fracture in his case took place normally. He did not think there was much danger of exciting inflammation by forcible manipulation in these cases, unless the joint had previously been purulent.

Dr. Shaffer's experience had led him to believe that there was considerable danger of exciting inflammation by such treatment; and he would prefer a stiff joint in good position to incurring such risks.

Dr. Ketch in closing the discussion, said that he believed his case belonged to a class which had never been accurately described. In ordinary cases of arthritis deformans, there was involvment of other joints. This was not true of his

case, and the sudden onset of such acute symptoms, and the speedy occurrence of anchylosis, were certainly unique. His patient had far too useful a limb to make him desire to incur any risks by employing forcible manipulation.

Hospital Reports.

SUPRA-PUBIC LITHOTOMY IN A PATIENT WHO HAD PREVIOUSLY BEEN SUCCESSFULLY OPERATED UPON FOR PERINEAL FISTULA.

UNDER THE CARE OF LACHLAN M'FARLANE, M.D., IN THE TORONTO GENERAL HOSPITAL.

J. S., æt. 49, admitted April 8th, 1890, complaining of frequency of micturition and great pain in passing water. Seven years ago patient for the first time observed that there was something wrong with his water; whenever he took "a drop of drink" he suffered subsequently from frequency of micturition. Five years ago he consulted a doctor for a lump in the perineum. A week after the scrotum became distended and discoloured and he had extensive extravasation of urine; free incisions were made and the patient recovered. A fistulous opening existed for a week or two in the perineum, through which urine trickled during the act of micturition; this subsequently closed up. Two years and a half ago patient states that he experienced a sensation as if "something burst" in the perineum, and a lump formed; a doctor was called in and a free incision made, and a perineal fistula again established which, however, closed up after five weeks. The fistula reopened three months subsequently.

In May, 1888, he came to the Toronto General Hospital and was admitted under Dr. McFarlane's care; complaining of inability to pass water freely and great pain during the act. Dr. McFarlane discovered a pretty tight stricture anterior to the triangular ligament. When he made water a small stream came through the meatus urinarius, and another through a fistulous opening in the perineum. An operation was performed, and a catheter retained in the urethra for 9 days; the fistula closed entirely. He left the hospital very considerably relieved, but still complaining of slight pain during micturition; this pain got worse, occasionally the stream would stop suddenly; he had frequency of micturition which latterly amounted almost to incontinence, the water constantly dribbling away.

The patient had been strong and healthy until 8 years ago. No history of syphilis; he had gonorrhœa 26 years ago, and a "second attack" six years subsequently.

On admission: suffering considerable pain and a constant desire to pass water. The urine dribbles away from him all the time, but occasionally he makes a special effort and passes about a tablespoonful, followed by a thick sediment, the passage of which causes him great pain. The pain is referred to the neck of the bladder, perineum, and just above the pubes. It is increased when he walks about, particularly if he takes a false step, and when he goes to stool. He has a hard lump in the perineum at the site of the former fistula. A sound was passed and a stone detected in the bladder.

On April 16th, Dr. McFarlane performed an operation. The pubes had been previously shaved and the parts thoroughly cleansed. Four ounces of warm boracic lotion were injected into bladder, and the catheter having been removed a tape was tied tightly around the penis to prevent the lotion escaping by the urethra. Pettersen's bag was then introduced into the rectum, and twelve ounces of warm water injected. An incision two inches long was made immediately above the pubes, and the various structures divided so as to expose the distended bladder. A stout silk suture was now passed through the bladder wall transversely, the viscus was incised across the line of the suture, this having been done, the loop of the suture lying within the bladder was drawn out at the incision, and this loop divided, leaving two sutures attached, one on either side of the bladder wound. The opening in the bladder was kept in apposition with the opening in the abdominal parietes by traction on the sutures. The forefinger was passed into the bladder and the stone detected. A forceps was now introduced and the stone extracted. The bladder was thoroughly irrigated with weak boracic lotion, and a drain tube passed through the wound down to the neck of the bladder; a few points of suture were introduced in the upper part of the abdominal inci-

sion. An absorbent dressing was applied and the patient sent back to bed.

The patient made an uninterrupted recovery, and left hospital on the 22nd of May. The wound above the pubes had long since healed and distressing symptoms had disappeared entirely.

Remarks: The stone extracted was of large size, ovoid in shape, measuring 2 inches in its long diameter and 1½ inches transversly; weight 825 grains; it was coated with phosphates. The supra-pubic operation was chosen in preference to lateral lithotomy for several reasons; the stone was judged to be of large size before operating; the hard lump in the perineum indicated the presence of inflammatory or cicatritial tissue through which the incision would have to be carried. This would probably yield very little and extraction of a large calculus would be difficult, and it is doubtful if the wound would heal rapidly. From these considerations and from the success which has of recent years attended the operation, it was deemed advisable to open the bladder above the pubes. The prevesical fold of peritoneum was not even brought into view during the operation. A plexus of veins lying on the anterior face of the bladder occasioned some difficulty when the bladder wall was reached, a ligature had to be passed around a section of these, and others were held aside while the incision in the bladder was made.

Books and Pamphlets Received.

Special Hospitals for the Treatment of Tuberculosis. By L. W. Flick, M.D.

Etudes de Clinique Infantile, par le Dr. Sevestre, Paris. Bureaux du Progres Medical.

Transactions of the College of Physicians of Philadelphia, 3rd series, vol. xi., edited by Dr. J. P. Crozer Griffith.

De la Grippe et son Traitment, par le sulfate de quinine, par le Dr. P. Gellie. Bordeaux: G. Gounouilhou, Imprimeur de la faculté de medicine.

Treatment of Torticollis. A Rational Brace for the Treatment of Caries of the Vertebræ, a Practical Splint for Inflammatory Conditions of Joints. By C. F. Stillman, M.D., Chicago.

Lymphatiques dés organes genitaux de la femme. Par le Dr. Paul Poirier, Paris.

Book Notices.

Révue Internationelle de Bibliographie Médicale, Pharmaceutique et veterinaire. Par le Dr. J. Rouvier. 10 francs. Paris and Beyouth.

This is an effort to establish a French equivalent to the Index Medicus. Each volume includes the bibliography of the preceding three months. The subjects are taken up in alphabetical order, and the titles of the articles translated into French. This is, to a Frenchman, a certain advantage, but it must tend to limit the circulation of the publication.

Chronic Urethritis, and other affections of the Genito-Urinary organs. By Matthew Berkeley Hill, M.B. Lond., F.R.C.S. Professor of Clinical Surgery in University College, London, etc. H. K. Lewis, 136 Gower St., London, W.C., 1890.

This is a revised publication of three lectures delivered at the Royal College of Surgeons in June, 1889. A series of colored plates, illustrating the appearances presented by the urethra in health and disease, as indicated by endoscopic examination, form an important feature of the work. The writer is well known as an authority on this subject, and it would be superfluous for us to make any comments on the practical usefulness or interest of lectures from such a well known source.

Etude ruthropompétrique sur les prostituér et les voleuses. Par P. Tamowsky.—*Bureaux du Progrès Médical, 1889.*

An interesting anthropometrical study on prostitutes and female thieves conducted in some of the Russian Hospitals and prisons. The authoress seeks to establish the fact that many prostitutes and thieves are such, not from misfortune or mere chance, but because these occupations are most pleasing to them. In summing up, she says: "They are incomplete beings, whose development has been arrested, and who show signs of physical and mental degeneration."

The influence of alcoholism and phthisis in the parents, as manifested in debauched and thievish children, is strikingly portrayed.

A Retrospect of Surgery: January, 1886 -January, 1890. Prepared by Francis J. Shepherd, M.D., C.M., Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University. Published by The Gazette Printing Company, Montreal, 1890.

The author of the retrospect has made a most happy selection in the matter he has chosen for publication from the vast amount of literature which has appeared since January, 1886. In a book of 261 pages it would be impossible to review in detail all the important work done in four years, yet one is surprised with the large amount of interesting and useful matter which is presented. A most useful feature of the book is the method which has been adopted of referring the reader to original papers, indicating the date of publication and the journal in which any paper referred to may be found.

A New Medical Dictionary: Including all the words and phrases used in medicine, with their proper pronunciation and definitions. By George M. Gould, B.A., M.D. Published by P. Blackiston, Son & Co., Philadelphia, 1890.

This is a book containing 519 pages, and, while it is thus of small size, it is marvellously complete. We can cordially recommend it to all who read medical literature, and who wish a work of reference to aid them in discovering the meaning and derivation of words and phrases, more particularly those of recent introduction. This work will supply a want long felt by the medical student. It is of small size and cheap, and contains all the information the student would expect to find in such a work. It far surpasses any of the smaller dictionaries we have examined, and we are therefore glad to have the opportunity of recommending it.

Wood's Medical and Surgical Monographs. Volume 6, Number 1. Including: The Human Foot: Its Form and Structure, Functions and Clothing. By Thomas S. Ellis, M.R.C.S. Modern Cremation: Its History and Practice. By Sir H. Thompson, F.R.C.S. Aphasia: A Contribution to the subject of the Dissolution of Speech from cerebral disease. By James Ross, M.D., LL.D. William Wood & Co., New York.

These monographs, published monthly, are now widely and favorably known amongst the profession. We must compliment the publishers on the matter which is from time to time selected for these periodicals.

The paper on Modern Cremation will be appreciated from the pen of Sir Henry Thompson, whose name has been associated so much with the development of the practice of cremation in England. Dr. Ross, as an authority on diseases of the nervous system, is too well known to require an extended notice of his interesting and exhaustive paper. Few of our readers have heard much of Dr. Ellis, nevertheless all who have the good fortune to read his paper will find in it a thoroughly original and suggestive treatise, full of interest, and containing many practical hints concerning the normal form and structure of the foot, with special application of ascertained facts to its proper functions and clothing.

The Doctor in Canada: His Whereabouts and the Laws which Govern Him.—A ready book of reference. By Robert Wynyard Powell, M.D., Ottawa.

The book gives a great deal of useful and interesting information about our profession and the members composing it. In the first place we find the various Acts which govern us in the different Provinces of the Dominion, and the full text of the British Medical Act of 1886. Following these are the Public Health Acts passed by the various local Legislatures. Part III gives much information regarding medical education in connection with the Provincial Licensing Bodies, and the Medical Colleges. Parts IV and V contain descriptions of the Hospitals, Asylums, Quarantine Stations, and Medical Journals. Part VI gives very complete lists of the licensed practitioners of all the provinces with their addresses. Finally we find the names of Physicians in Parliament, Medical Military Officers, Coroners, Health Officers, and Medical Examiners for all the Life Insurance Companies.

The book makes no pretence of originality, but certainly contains a vast fund of information which should be highly appreciated by the Profession of the Dominion. It is in short a sort of dictionary of Canadian things and persons medical. It is a kind of book which every physician should have, and is likely to prove about

as useful to the doctor as the Canadian almanac is to the general citizen. Dr. Powell must have expended an immense amount of work on his book, and we hope that he will receive the encouragement he deserves.

Spinal Concussion. By S. V. Clevenger, M.D., with thirty wood engravings. Philadelphia and London: F. A. Davis, 1889.

In this book of three hundred and sixty pages, spinal concussion is considered as a form of traumatic neurosis, for which the designation of Erichsen's disease is suggested. The book is largely made up of excerpts from the writings of many others on this subject, notably, besides Erichsen himself, of Page, Appenheim, Erb, Spitzka, Bramwell, and Seguin; to these the author has added much of his own, including a large number of very interesting cases. The chapter on Electro-Diagnosis will be found useful. As the author points out, but few of the profession are competent to undertake a thorough electrical examination; and if this book leads some to study electro-therapeusis and electro-diagnosis, it will have done much good. To those who may be called upon to give evidence in cases of so-called "railway spine" and other injuries, the work will prove most helpful. The tone generally is rather controversial, and the style at times anything but elegant; this later editions may correct. There are a number of excellent plates, and the publisher's work is all that could be desired.

COLLEGE OF PHYSICIANS AND SURGEONS.

MAY EXAMINATIONS.

The passes in the primary are as follows:

H. B. Anderson, Apsley, Ont.; P. M. Brown, Sarnia; A. S. Bueglass, Bright; W. E. Brown, Roseneath; E. B. Blain, Hamilton; W. F. Brown, Medina; D. B. Bentley, Forest; T. Beath, Columbus; W. W. Baldwin, Toronto; D. A. Beattie, Blair; H. A. Bruce, Port Perry; B. Bayley, London; E. J. Bowes, Ottawa; C. H. Burritt, Mitchell; T. H. Balfe, Smith's Falls; A. M. Clark, Elcho; F. S. Comfort, Campden; W. Chambers, Toronto; Annie Chambers, Port Elgin; A. P. Chalmers, Poole; D. A. Clark, Agincourt; J. W. Cunningham, Hespeler; J. A. Cowper, Welland; J. W. Campbell, Kingston; A. H. Coleman, Belleville; D. A. Coon, Elgin; J. Delahunt, Moorefield; Bertha Dymond, Brantford; J. A. C. Evans, Bradford; W. M. Earl, Winchester; T. H. Ellis, Ottawa; E. B. Echlin, Copetown; W. A. Empey, Winchester; F. Fenton, Toronto; W. S. Ferguson, Avonbank; R. F. Forrest, Mount Albert; Mattie J. Foster, Welland; A. E. Fraleigh, Arva; P. A. Gillespie, Cannington; R. H. Green, Ayr; Jennie Gray, Rebecca Gray, H. H. Gray, Toronto; T. J. Gowan, Creemore; A. S. Gorrell, Brockville; S. D. Green, Arnprior; J. C. Gibson, Milverton; F. H. Henning, Toronto; J. F. Hanly, Waubaushene; F. H. Hagerman, Parkhill; J. A. Hershey, Garrison Road; D. Herald, Medicine Hat, N.W.T.; A. Haig, Menie; W. E. Inksetter, Copetown; J. T. Kennedy, H. M. Lloyd, Toronto; J. W. Leiniger, Hopetown; A. J. Murray, Embro; J. A. Mitchell, Caistorville; T. H. Middleborough, Owen Sound; W. E. Matthew, Beeton; H. Millard, Newmarket; W. H. Miller, Cottam; M. W. Murray, Beechwood; D. N. McLennan, Port Hope; G. P. Meehan, Edinburgh; J. S. McCulloch, H. B. McConnell, Toronto; D. A. McPherson, Crief, D. McEachren, Harriston; O. McCulloch, Everton; J. McAsh, Varna; H. F. McDonald, Rodney; J. A. McEwan, London; E. H. S. McLean, Kingston; A. E. McColl, Campbellford; F. J. McCammon, Kingston; A. W. Nixon, Esquesing; W. Northup, Forest; R. J. Nudric, Hampton; J. H. Oldham, Kingston; H. H. Oldright, Toronto; F. J. Old, Caledonia; H. C. Parsons, R. B. Potts, Toronto; L. Phelan, North Gower; A. Quackenbush, Morpeth; C. C. Richardson, Vandarf; J. F. Ross, Argyle; W. Robertson, Chesterfield; W. W. Saulter, Toronto; F. L. Switzer, Carleton Place; M. Sharp, Alberton; L. W. Shaw, Lucan; L. C. Sinclair, Tilsonburg; W. A. Thompson, Roseville; A. S. Tilley, Julia Thomas, Bowmanville; J. J. Thomson, Avonton; J. Watson, Sherwood; J. A. Wilson, Lakelet; D. F. Webster, Glencoe; A. S. Wade, Perth; Isaac Wood, Kingston; J. W White, Branchton; J. H. Youell, Aylmer.

The following candidates passed the final examination for the license of the college:—

A. G. Aldridge, Port Hope; J. C. Auld, Forest; D. Archer, Burketon; Mary L. Agar, Chatham; E. H. Adams, Toronto; H. T. Arnoll, A. P. Ardagh, Barrie; W. W. Baldwin, Toronto; B. Cayley, London; E. J. Bowes, Ottawa; Minnie Brown, Strathroy; J. D. Berry, Warkworth; G. T. Bigelow, Port Perry; R. V. Bray, Chatham; E. T. Boyes, Binbrook; W. F. Bryans, Susannah P. Boyle, Toronto; W. L. Bond, Newmarket; W. A. Baker, Stouffville; M. C. Black, Glammis; J. H. Burger, Toronto; L. F. Barker, Ingersoll; E. J. Boyes, Toronto; J. H. Bell, Colborne; F. S. Comfort, Campden; A. H. Coleman, Belleville; T. S. Cullen, Sarnia; R. J. Crystal, Arthur; F. R. Clarke, Colborne; C. B. Coughlin, Hastings; C. B. Carveth, Port Hope; E. M. Copeland, Ealing; D. Cunningham, Kingston; J. Delahunt, Moorefield; S. Douglas, Marsh Hill; F. A. Drake, South Cayuga; J. A. Dinwoody, Clover Hill; F. J. Dolan, Belleville; Clara Demarest, Napanee; Thomas H. Ellis, Ottawa; W. S. Ferguson, Avonbank; R. Ferguson, London; J. E. Forfar, W. J. Fletcher, Toronto; C. E. Flatt, Millgrove; C. A. D. Fairwell, St. Catharines; A. Freeland, Ottawa; Mrs. Rosina Fennell, Kingston; A. S. Gorrell, Brockville; J. H. Ghent, Toronto; J. H. Gimby, Owen Sound; A. J. Goold, Mt. Pleasant; J. A. Gibson, London; A. R. Gordon, Toronto; W. A. Gray, Perth; W. C. Herriman, Lindsay; D. J. Hutchinson, Ingersoll; A. N. Hayes, Parkhill; A. T. Hobbs, London; R. M. Hillary, Aurora; G. Harrison, Selkirk; Mary Hutton, Forest; C. A. Hodgetts, Toronto; R. Hill, Aylmer; R. G. Howell, Jarvis; W. T. Holdcroft, Tweed; W. E. Inksetter, Copetown; H. Irwin, Pembroke; A. F. Irwin, Chatham; F. H. Kalbfleisch, Paisley; T. E. Kaiser, Edgley; Miss Ida E. Lynd, Bond Head; G. D. Lockhart, Mount Brydges; M. W. Murray, Beechwood; J. A. Macdonald, V. A. Michell, Toronto; M. T. MacFarlane, Ridgetown; W. C. Morrisson, Elmwood; E. R. Morton, Barrie; W. C. B. Murray, Harrington West; A. C. Mavety, Odessa; James A. McEwen, London; H. A. McColl, Georgetown; W. McGillivray, Whitby; J. D. McNaughton, North Keppel; J. H. McFaul, Seaforth; O.E. McCarty, Belleville, C. F. McGillivray, Whitby; D. McLeod, Cannington; D. K. McQueen, Ripley; J. A. McGregor, Longwood; J. W.J. McCullough, Dundalk; W. A. A. McPherson, Prescott; A. McDonald, Vanleek Hill; Maggie McKellar, Ingersoll; Jas. McKenty, Kingston; R. J. Maddrie, Hampton; John Noble, Arthur; C.T. Noble, Sutton West; C. B. Oliver, Motherwell; L. Phelar, North Gower; S. G. Parker, Toronto; W. M. Pugh, Milverton; W. H. Philp, Waldemar; W. Robertson, Chesterfield; T. Russell, Alton; L. E. Rice, Embro; T. B. Richardson, Goderich; C.Sheppard. Toronto; W.D.Springer, Nelson; J. M. Sifton, Thamesford; D. Smith, Belmont; C. L. Starr, Brooklyn; R. Schiell, Plattsville; D. K. Stenton, Port Lambton; T. L. Stringer, Stoney Point; J. R. Shannon, Kingston; W. Thistle, Toronto; J. F. Uren, Medina; F. Walsh, Guelph; G. Wright, Wheatley; Mrs. Hattie Walker, Pitts' Ferry; F. Zwick, Belleville.

Personal.

DR. E. B. O'REILLY has resigned his position as superintendent of the Winnipeg General Hospital, and will be acting superintendent of the General Hospital in Toronto during the absence of his brother, Dr. Charles O'Reilly, who will spend three months in Great Britain and the Continent.

The following have been appointed assistants in the Toronto General Hospital for the ensuing year: Drs. C. F. McGillivray, L. F. Barker, T. S. Cullen.

DR. MCFARLANE, of Toronto, sailed for Europe, from New York, May 24th. He will spend most of the summer on the continent, and expects to attend the meeting of the International Medical Congress.

DR. NEIL L. MCPHATTER, formerly of Guelph, who settled in Cleveland after his return from Birmingham, where he worked six months with Mr. Lawson Tait, has gone to Denver, Colorado, where he is engaged in a large and lucrative practice. He has the chair of Gynæcology in the university of that city.

Births, Marriages, and Deaths.

BIRTHS.

HEARN—On May 18th, the wife of Dr. R. Hearn of a son.

DEATHS.

ELLIOTT—On Saturday, the 24th inst., Jeanie Elliott, beloved wife of Dr. J. Ephriam Elliott, and eldest daughter of Warring Kennedy, Esq., of this city.

Miscellaneous.

A Provincial Medical Association has been formed in Manitoba, with the following officers: President, Dr. Macklin, Portage la Prairie; first vice-president, Dr. Donnell, Winnipeg; second vice-president, Dr. McDonald, Brandon; secretary-treasurer, Dr. Jones, Winnipeg.

A BEAUTIFUL CANADIAN STORY.—*The Graphic*, Chicago's popular illustrated weekly, is publishing a beautiful story of Canadian life, by Mrs. Mary Hartwell Catherwood, author of the famous "Romance of Dollard," the "Story of Tonty," and other charming chapters of Canadian history and tradition. *The Graphic* story is entitled the "Children of Ha-Ha Bay," the scene being laid successively near St. Alexis, Chicoutimi, and Tadoussac.

MEDICAL LIBRARY.—These new books have been received at the Ontario Medical Library: Seven reprints on "Intubation," by Dr. O'Dwyer; "Transactions of the American Orthopædic Association," Vol. 1, 1889; "A Retrospect of Surgery," Shephard; "Manual of Life Insurance Examinations," Dr. James Thorburn; "A Treatise on Bright's disease of the Kidneys," Millard; Surgical Bacteriology," Senn; "Insomnia and its Therapeutics," MacFarlane; "Hypnotism: Its History and Present Development," Bjornstrom; "Guy's Hospital Report, 1889."

SIR WILLIAM GULL.—The London *World* says:—The fact that the will of the late Sir William Gull has been proved, showing property to the amount of nearly three hundred and fifty thousand pounds, has created much talk during the past week. It is beyond a doubt that for the last few years, since physicians have doubled their fees, and since both branches of the profession are constantly in receipt of very large sums for expeditions by rail, the earnings of members of the healing art have very largely increased. There are possibly a dozen medical men in London who, at their death, will be found to have amassed a hundred thousand pounds; but there is probably not one who has put by anything like the fortune left by Sir William Gull. "Put by" is scarcely the term. Sir William was a very careful, not to say parsimonious, man, his expenses were comparatively small, he entertained very little, his practice was extensive, and from time to time he received from grateful patients, special presents of large amounts. But it was in the dealings with and the investing of those large amounts that the fortune was made, and in this it is understood thar Sir William had the advantage of excellent advice.

By-the-bye, here is a good Gull story, which, though a "chestnut" to some, to the thousands who have never heard it, is worth telling. Sir William's butler was a great character; a small, dark man, always white-chokered, and dressed in black, with a calm solemn manner. His income from tips must have been large, as the waiting-room was always crammed, and the order of audience was settled by him. One day summoned to the street door by a more than ordin

ary fierce knock, he found an excited individual just alighted from a cab. "Sir William Gull in?" "Yes, sir." "I want to see him." "Have you an appointment, sir?" "Appointment?—no! I'm very ill. I want to see Sir William." "Impossible, sir, without an appointment." Naughty word emitted by visitor; then: "When can I see him?" "Well, sir," after consulting paper, "At eleven on Tuesday next." "Tuesday next be——! I'm very ill! I tell you I must see some one! Do you know anyone near who could see me?" Servant, after cogitation: "Well, sir, there's a gentleman over the way—*a very respectable practitioner named Jenner*—he might be able to see you!"

Extra Selections.

QUESTIONS CONCERNING THE CÆSAREAN SECTION.—No one has a right to speak with greater authority upon this subject than Sanger. An article which he has contributed to a recent number of the *Centralblatt fur Gynakologie* gives a brief history of the operation since the publication of his paper of eight years ago, in which he advocated improvements and modifications of the old, classical, and in many ways faulty, operation. With candor he admits that some of his propositions at that time have properly been superseded by others. He considers the fundamental elements to success in this operation to be asepsis, and the proper suturing of the uterine wound. The five necessary steps are incision of the abdomen, incision of the uterus, extraction of the uterine contents, suture of the uterine wound, and suture of the abdominal wound. He thinks the danger of hemorrhage has been overestimated. If the uterine wound is properly closed, there can be no hemorrhage except from the interior of the organ, and if the organ is in a state of atony, that will occur even when delivery has been accomplished through the natural channels. This leads him to lay down the absolute rule that the operation should not be performed until labor has begun, and the most auspicious time is toward the close of its first stage. Those who have performed it before the conclusion of the usual term of pregnancy have usually had occasion to regret it. He favors Duhrssen's method of tamponing the uterine cavity with iodoform gauze, should atony with hemorrhage occur. He also has positive opinions respecting the use of the elastic ligature for the constriction of the uterus during the operation, believing that, unless the constriction is moderate and of short duration, atony and hemorrhage will be encouraged. Schauta's method of constricting the uterus with the hands is recommended as a good one, though not always easy of accomplishment. A better method would consist in throwing a broad bandage of some antiseptic material around the organ, and constricting it with the hands to the necessary degree. He is decidedly in favor of the longitudinal incision in the anterior wall of the uterus, rather than the transverse incision of Kehrer or the longitudinal incision in the posterior wall of Cohnstein, even though the placenta is implanted upon the anterior uterine wall. Washing out the uterus with antiesptic solutions is deemed unnecessary and in some cases injurious, and even the toilette of the peritoneum need not be very elaborate, as it is now believed by competent observers that a moderate quantity of blood, serum, or cystic fluid in the abdominal cavity does no harm.—*N. Y. Med. Jour.*

ARSENIC AND BICHLORIDE OF MERCURY IN THE TREATMENT OF ANÆMIA.—Although it is perfectly true that we have almost no knowledge of the manner in which alteratives act in instances of disease where, through morbid functional activity, enlarged glands or growths appear, it is evident that they must act upon the trophic nerves or directly upon the nourishment of the affected parts. If they are used in large quantities they act as depressants to the normal nutrition of the body, producing primarily a decrease in the vitality of morbid growths, so that they melt down and disappear, and they may finally so reduce the condition of the healthy tissues as to cause sloughs and ulcerations. Whether these changes are due to the over-stimulation of nutrition—that is, to an excessive trophic change—or whether they depend upon actual lowering of the tone of the parts we know not. One thing we do know, however, and that is that small doses of most of the so called alterative drugs act as very distinct stimulants to the development of normal structures, and in no instance do we find this more

typically represented than the effect which they exert on the blood Quite a number of years ago Keyes, of New York, emphasized the value of minute doses of mercury bichloride in syphilitic and other anæmias, and abundant clinical observation has certainly confirmed his views. The dose of bichloride of mercury in anæmia should be about one-fortieth of a grain. Not only will minute doses of the bichloride of mercury act in this way, but small amounts of calomel or mercury itself will have such an effect.

Inunctions of very small amounts of mercurial ointment, once a day, or every other day, in adults and children, will increase the fulness and redness of the cheeks and lips, and the number of the corpuscles, the piece of ointment used being no larger than the half of a very small pea. This treatment will be found of service in cases not dependent upon specific taint or scrofula. The marked increase in the nutrition of children of syphilitic taint, who are suffering from marasmus, under the use of gray powder and inunctions, gives further evidence of this fact.

Arsenic also is of value in anæmic conditions, and may be employed in comparatively larger doses than mercury; but, nevertheless, smaller amounts than are usually given in chorea and similar states. Osler has shown the value of the drug in anæmia, and so has Barton, of University College, in England. Any one of the preparations may be employed, but not more than one-sixtieth of a grain of arsenious acid should be taken in a day, although more has been used with no less benefit to the patient. Most of the drug under these circumstances is in excess and is cast off in the urine and fæces unused and wasted, and strains and irritates the emunctories of the body during its passage through them.—*Med. News.*

MEDICAL TREATMENT OF DYSMENORRHŒA.—Dr. E. W. Mitchell writes as follows on the medical treatment of dysmenorrhœa: Remedial measures naturally divides themselves into those of relief and those of cure. Of the former, opiates occupy the first place in their power to relieve and in their power for ultimate evil; but once used, the danger of the opium habit is great. The bromides, chloral, tincture of cannabis indica, hyoscyamus, belladonna, are all valuable. In plethoric women with scanty flow he has often found the bromides, combined with belladonna or hyoscyamus, promptly effective in affording relief. Sometimes the pain may be arrested by beginning their administration a day or two preceding the flow. Cannabis indica is useful in certain spasmodic cases, and in cases with a free flow. Antipyrine is a valuable addition to our means of allaying pain, and will give temporary relief in a large majority of cases, whatever the diseased condition, but the author has not been able to observe any curative effect. Caution should be exercised in its administration, since in too large doses dangerous symptoms may arise, especially in anæmic women. Dr. Palmer speaks highly of concentrated tincture of cimicifuga and of tincture of pulsatilla. Dr. Mundé also recommends pulsatilla in the neuralgic form. The physician may very wisely give his patients (and especially the anxious mothers) a warning against overdosing and oversoaking. Rest in bed, the application of dry or moist heat, an occasional hot sitz bath, the moderate drinking of hot fluids, are domestic measures which will afford a certain amount of relief. The dosing with gin or whisky, with tansy tea, etc., should be discouraged. With cannabis indica in cases in which the flow is free; belladonna or hyoscyamus in spasmodic cases; antipyrine, possibly oxalate of cerium, pulsatilla, etc., we have a list of remedies for relief which are safe and usually effective for the time. Bromides in congestive cases, used occasionally or for short periods of time, may be valuable, but their prolonged administration disorders the stomach and favors anæmia. Chloral should be used with circumspection, on account of the liability to the establishment of the chloral habit.—*American Journal of Obstetrics.*

THE USE OF FLUORESCEIN AS A MEANS OF DIAGNOSING LESIONS OF THE CORNEA.—Dr. Straub, a Netherland army surgeon, first discovered that a solution of fluorescein, when dropped upon a portion of the cornea which was deprived of its epithelium, would color this spot a deep green and leave the rest of the cornea unchanged.

For the past two months, in the eye clinics of the Johns Hopkins Hospital and the Presby-

terian Eye and Ear Charity Hospital, I have been testing the value of this method of diagnosing corneal lesions. The experiments number over a hundred, and have led me to positive conclusions.

Fluorescein is a red powder, soluble in water, a product of coal tar distillation. I employ a solution of 10 grains of the powder to the ounce of water, to which is added 15 grains of the bicarbonate of soda.

I have never known the solution to have an irritating effect, and I have used it in the most intense forms of corneal inflammation. The portions of the cornea stained retain the color from half an hour to several hours. The solution produces not the slightest impression upon the healthy cornea. I have always found that when positive defects in the corneal epithelium existed, in other words where there was actual loss of substance, the coloration was more apparent. So long, then, as it is possible to color any portion of the cornea, we may be certain that some lesion still exists. In excoriations of the cornea positive results were the rule. One case I remember particularly, where the cornea had been scratched by a blow from a twig, and where the extent of the excoriation was scarcely visible to even oblique illumination. Every detail of the wound, and every minute point, where the epithelium had been removed was clearly brought out by a drop of the fluorescein solution. In ulcers of the cornea positive results were always obtained. In simple superficial keratitis the coloration was much less distinct than when this disease was associated with an ulcer. In parenchymatous keratitis the results were invariably negative. In three cases of iritis, uncomplicated with corneal trouble, I failed to obtain any coloration. In two other cases of iritis of syphilitic origin where the cornea was involved, superficially as well as interstitially, marked coloration was observed. In two cases of acute glaucoma the result was absolutely negative.

In foreign bodies in the cornea, no matter how small the foreign substance was, its position and size were located to a nicety. Here the coloration was immediate and distinct, showing itself by a green ring just around the foreign body. In phlyctens of the conjunctiva the color was rather yellow than green. Only in those cases where the phlycten was located on the limbus of the cornea, and the latter had been involved to some extent, was there any positive green coloration to be seen. Pterygia and pinguiculæ gave negative results. With the exception, then, of phlyctenular conjunctivitis, the solution is inapplicable to any of the other forms of conjunctival inflammation.

When one understands that where the coloration is produced the anterior epithelium is involved, the agent is of value in detecting, with accuracy, lesions of this part of the cornea. Ulcers so small that it is impossible to see them by diffuse daylight, are brought out with perfect distinctness, quite as clearly, indeed, as under oblique illumination ; and I can readily believe that small points, which it is possible to overlook even with the oblique illumination, would invariably be revealed by a drop of the solution, and, moreover, in half the time that it takes us to subject a patient to the former method. In minute ulcers of the cornea in very young children, where the blepharospasm and photophobia are frequently so intense that the lids have to be forced apart in order to get a view of the eye-ball, and then the latter is rolled about so continuously, and the cornea flits so rapidly before our eyes, that we are obliged to simply infer, from the attendant symptoms, the nature of the trouble without actually seeing the lesion itself, a drop of the solution will locate the disease and its extent, and bring it out distinctly so that it can be seen, no matter how fast the eye-ball moves about. In such cases I am inclined to think that the fluorescein solution will be a help in establishing a diagnosis. I am using the solution every day, and find it useful in bringing to light lesions of the cornea so small as to be readily overlooked in the hurry of a crowded clinic. Clinical experiments seem to show that positive results are only to be seen when there is some lesion or break in the anterior epithelium of the cornea. Troubles beneath the corneal surface give vague, and hence unreliable, results. Two of my colleagues on the staff of the Presbyterian Eye and Ear Hospital, Drs. Harlan and Woods, have been cooperating with me in trying the solution, and their views coincide entirely with mine.—*R. L. Randolph, M.D., in Johns Hopkins Hospital Bulletin.*

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

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☞ Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, JUNE 16, 1890.

Original Communications.

INFANTILE PARALYSIS.*

BY BERTRAM SPENCER, M.D., M.R.C.S.

Mr. Chairman and Gentlemen:

The subject of my paper for this evening has been selected, not for the purpose of propounding any new theories, nor any new plan of treatment of my own, but from the fact that one or two cases, that I have lately seen, have been of interest to me, and in the hope that any discussion on the subject may elicit from those present some light on the pathology and treatment, and more especially the treatment in the later stages of this rather unsatisfactory disorder.

Infantile paralysis; essential paralysis of children is an older and more senseless term; spinal paralysis of children; acute polio-myelitis of children, are some of the names given to this disease by various authors, which was first accurately described by Heine, a German observer, in 1840. He was the first to express the opinion that disease of the spinal cord was the chief factor in this paralysis, which opinion was confirmed later by Prevost, Vulpian, Charcot, and others, by the demonstration of actual pathological changes in the spinal cords of those suffering from this disorder.

This paralysis, as the name indicates, occurs almost altogether in children, during the earlier years and while dentition is in progress; though I myself have not seen, nor have I been able to find recorded, a single case where dentition alone might fairly be claimed to have been the cause of an attack.

Exposure to cold also is frequently accredited with the onset of this paralysis, and probably with more fairness than the cause I have just cited.

Bristowe says: "Its causes are obscure; it seems, however, neither to be hereditary, nor to be dependent in any degree on privation or other conditions associated with poverty. Dentition would appear to be largely concerned in its causation, and it has often been observed to follow on measles, gastric fever, and other febrile maladies."

Exposure to cold and damp is undoubtedly a common cause of the disease. Beard, Rockwell, Eustace Smith, Gowers, and others, also quote cases in which exposure to cold appears undoubtedly to have been the exciting cause.

Strümpell, on the other hand, says: "An exciting cause, like taking cold, has hardly ever been made out. The children are almost always perfectly healthy previously, and come of healthy families without any neuropathic predisposition. The whole course of the disease makes the hypothesis very probable that we have to do with an acute infectious disease—with an infectious process, which first causes a general infection of the body, and then is localised chiefly in a circumscribed portion of the spinal cord. It also, perhaps, bears some relation to the nature of the disease as just signi-

* Read before the Toronto Medical Society.

fied, that most of the cases occur in warm weather."

The prevalence of the occurence of this disorder during the warmer months of the year has been noted by most of the authorities I have had an opportunity of consulting.

Thus Eustace Smith, quoting from statistics of 149 cases collected by S. Smith, of Philadelphia, notes that 77, or rather more than 50 per cent, occurred in the months of July and August; while out of 111 cases reported by Dr. Barlow, of Manchester, 48 occurred in the same two months, and adds that although these are the two hottest months of the year, they are also those in which alternations in temperature are more rapid and unexpected, and in which, therefore, sudden chills are likely to be incurred.

In a case which I saw last year, Willie S., aged 3 years, walked with his mother on the 12th July to the exhibition grounds to see a procession of Orangemen.

The child had been perfectly well up to that date, of a bright, sanguine disposition, rather precocious for his age, and always climbing into all kinds of mischief.

The day was very warm and he perspired freely. On returning home he refused his tea, and became fretful and peevish and vomited during the evening.

I saw him at about 9 o'clock and found him somewhat feverish, his temperature being 103°; he had a slight pain in the back. I prescribed an effervescing saline mixture, and ordered cold water to be applied to the forehead and nape of the neck, thinking him to be suffering from a mild form of sunstroke.

The next day his mother called my attention to the fact that he had lost the power of his legs, and on my lifting him out of bed and standing him on the floor his legs collapsed under him; the reflexes, especially in the right leg, were absent, and the diagnosis was then easy.

Now, in this case, both parents and child were perfectly healthy; they were in comfortable circumstances; dentition was not in progress; it was the height of summer; to what then may we attribute this attack of paralysis? Was it to a chill following after the long hot walk, or was it as suggested by clinical history?

The onset of infantile paralysis is generally, as in the case just quoted, sudden; in many cases the child shows no symptoms of illness whatever, it goes to bed perfectly well, and in the morning a limb hanging motionless and paralyzed is the first sign of any mischief.

In other cases there may be high fever, great constitutional disturbance, headache, pains in the loins and back, together with cerebral symptoms, stupor, twitchings or general convulsions. After this initial period has passed away the child is attacked by a more or less extensive paralysis.

This paralysis spreads rapidly, either both legs or the legs and one arm, or all the extremities become affected in a very short time. There is no paralysis of the face or the parts supplied by the cranial nerves, and the mind, after the febrile stage has passed off, is not affected, nor is there loss of power over the sphincters of the bowel or bladder. Sensibility in the paralyzed part remains normal, there is no pain, nor tendency to the formation of sores or sloughs.

The general health becomes completely restored, the child eats heartily and sleeps well, but there remains an inability to use the affected limb. A flaccid, atrophic paralysis. Together with this flaccidity of certain muscles or groups of muscles there is a loss of electro-muscular contractility, so that they respond but faintly or not at all to the faradic current.

An important feature of infantile paralysis, however, is that the muscles, which will not respond to faradisation, will exhibit contractility under the galvanic current, so that in the treatment both currents are necessary—the faradic for the purpose of diagnosis, the constant for therapeusis.

Together with these signs of loss of reflex action, we have atrophic changes in the limb, which, however, come on later. It becomes cold and purple, the pulse is small, the fat becomes absorbed, the muscles wasted, ligaments of the joints become relaxed, and the whole extremity is backward in its growth, so that the bones are often considerably shortened.

The paralysis is at first much more extensive and complete than it becomes later on; after some weeks, probably, a partial recovery takes place in those muscles whose contractility was not altogether destroyed at the outset.

In some fortunate cases the paralysis may

disappear entirely, but as a rule complete paralysis is left in one extremity, most frequently in the leg or in some groups of muscles of the leg, generally those on the anterior and external aspect, viz., the common extensor of the toes, the peronei muscles and the tibialis anticus, giving rise to talipes equino-varus, the deformity most commonly met with as the result of this form of paralysis.

In paralysis of the muscles of the calf, on the other hand, the deformity will be of the calcaneus variety.

Most of the authors that I have consulted, ascribe these deformities to the contraction of the muscles antagonistic to those which are paralyzed; and the treatment or the prevention of these contractions and deformities appears to me to be of such moment, that I trust I may be excused if I quote what is said by Eustace Smith on the subject in his own words: "One of the most important and characteristic results of the disease consist in the paralytic contractions, which almost invariably occur when muscles are permanently disabled, and constitute various kinds of deformity. They are especially common in the feet, and are the principal cause of the different forms of club-foot, which develop in the child after birth. The contractions occur, not in the paralyzed muscles as a rule, but in those which still retain their contractile power. They begin early and tend to increase as time goes on. This contraction of unaffected muscles, or of muscles partially affected, was attributed formerly to the influence of a so-called muscular-tonus."

It was supposed that a constant stimulus proceeded from the spinal cord, and kept all the healthy muscles in a state of slight contraction. In the normal condition, it was said, opposite muscles neutralize one another; but if the muscles become paralyzed on one side so that the contracting pain on that side is abolished, the limb is drawn to the affected side by the action of the tonus in the unaffected muscles.

This theory was combatted by Werner, who maintained that the contraction could be explained without recourse to the imaginary tonus. He asserted that when one set of muscles was paralyzed there is no deformity until the opposite set of muscles is put into action. The limb is then drawn to that side and cannot be replaced by the paralyzed antagonistic muscles. It therefore remains in its new position until replaced, or until it falls back again by its own weight. Consequently it must happen that the limb is often and long in one position, for the muscles, once contracted, remain so, because the antagonistic muscles can no longer act. After a time they lose the power to relax, and a permanent contraction becomes gradually established.

Volkman and others, however, have pointed out that the deformities are only partially caused by the inability of the paralyzed muscles to oppose the contractions of the healthy muscles They believe the most important factors to be the weight of the affected limb itself, and the greater pressure thrown upon it when in use.

Talipes *equino-varus*, the most common deformity in the lower limb, is just the position the foot takes when the ankle-joint is not acted on by its muscles. If a child has not walked this is invariably the deformity we meet with. The foot naturally falls into this position, and the shortened, flabby muscles, in course of time, become permanently fixed in this position.

The growth of bone, too, being arrested, the affected limb is shorter than its fellow, and the child is compelled to point its toes towards the ground, all tending to produce the same deformity.

According to the same author, if the paralysis occur in a child who has already learnt to walk, talipes-valgus is the deformity he may expect to meet. The child brings its weight to bear on the sole placed flat on the ground; the foot being no longer steadied by the paralyzed muscles curves outward until the ligaments are made taut; these in time become stretched and the foot fixed in this position.

This form of talipes-valgus, however, is not so complete as that caused by over-exercise and fatigue, for, when the weight is taken off the limb, the foot naturally falls into the equino-va us position; and the weight of the foot itself, acting as a counterpoise to the affected muscles, draws them back to the normal position.

Strümpell is in accord with Volkman on this point, believing that weight and pressure are prominent factors in causing the various deformities met with. He says: "After the paralysis has existed for a long time, certain secondary contractions almost always develop in the para

lyzed parts, which are in part of a very characteristic type. In the legs especially, the paralytic club-foot (talipes equino-varus) is a symptom long known. It is due to the fact that from paralysis of the peronei muscles, and of the tibialis anticus, the point of the foot constantly droops, and that a contracture is gradually developed in the antagonistic muscles of the calf, whose points of insertion are permanently approximated. In paralysis of the muscles of the calf, on the other hand, there arises a moderate degree of calcaneus from the contracture of the antagonists. In the arms and in the vertebral column, in paralysis of the spinal muscles, the most manifold and sometimes very considerable contractures and deformities may also arise, the chief cause of which is always to be referred to the contracture of unparalyzed antagonists, and to external mechanical conditions like weight and pressure."

I have perhaps, gentlemen, been somewhat tedious in my quotations and in my attempts to describe the exact causes of the deformities, especially of the lower limb, in infantile paralysis; but the fact that it is these deformities, which we have to treat, and that the question of tenotomy and other operative interference may occasionally arise in connection with them must, I say, be my excuse for such prolixity.

I do not believe the diagnosis of this affection to be at all a difficult matter as a rule. We have certain definite and well-marked symptoms pointing to this lesion of the nervous system and to no other.

The motor paralysis without alteration of sensibility; the non-response of the muscles to the faradic current, together with the absence of reflex action; the non-implication of the sphincter muscles of the bladder and rectum, or of those supplied by cranial nerves; and lastly the absence of any tendency to sloughing or to sores on the parts exposed to pressure, are points which separate distinctly this paralysis from those of cerebral origin, from general myelitis, and other affections of a similar character.

Formerly, infantile paralysis was supposed to be of peripheral origin, and to have its seat in the affected muscles.

Heine, as I have said, was the first to discover that it was an affection of cerebral origin, and that its seat was in some portion or another of the spinal marrow.

It consists of an acute inflammation affecting the gray matter of the cord, generally the anterior gray cornu of one side, though the white matter is sometimes more or less implicated.

In recent cases, according to Gowers, there is abnormal redness of the anterior gray matter, the vessels running from the surface to the cornu are distended with blood.

Under the microscope the capillaries are seen distended; there are extravasations in the grey substance and swelling of the neuroglia and ganglion cells, which become granular and lose their processes; the anterior bone becomes softened and filled with granular *débris* of disintegrated nerve cells.

These are the appearances to be met with in the earlier stages. Later on the bone becomes shrunken so as to be easily seen by the naked eye; the nerve cells disappear altogether and are replaced by fine connective tissue, and well-marked sclerosis occurs.

The anterior white columns are often in a state of degeneration, the neuroglia is thickened, the nerve fibres atrophied, and the columns themselves shrunken and small.

If the paralysis affects one arm, the corresponding anterior cornu in the cervical enlargement is atrophied; if one leg alone is affected, the atrophy will be found in the corresponding lumbar enlargement. This anterior cornuitis is the primary centre of the disease; the posterior columns and the brain being always unaffected in the post-mortem.

So the lesion of infantile paralysis is an acute myelitis of the anterior gray cornu, leading to circumscribed patches of sclerosis with complete destruction of the large ganglion cells and other nerve elements.

So much briefly for the pathological changes in the spinal cord.

The changes seen microscopically in the muscular fibres in well-marked cases are about as follows:

(1) The transverse striæ are less distinct, they are frequently broken, and the longitudinal fibres become more marked.

(2) The muscular fasciæ become composed entirely of longitudinal fibres, the transverse striæ rapidly disappearing.

(3) The longitudinal fibres become less distinct, and are interspersed with oil globules or fat cells.

(4) The fat becomes more abundant, the muscular fibres less distinct, and the fascia becomes a discolored, shapeless mass; having lost almost all electro-contractility, and changed from a muscle into a mere fibrous bundle.

The stunted growth of the limb, the absence of cutaneous and tendon reflexes, the cold and cyanotic appearance of the extremity, all point to trophic disturbance referrible to the destruction of nerve tissue in the affected part.

"Will my child be a cripple for life?" is a question which has been asked of all of us by the parents of a child suffering from this paralysis; and this question should, I think, be answered with some reserve.

So many cases show, after a time, such great improvement in the tone of the paralyzed muscles, even when left quite to themselves, that a gloomy prognosis is often a faulty one; at the same time, the improvement may be so rapid at first, that parents may be too hopeful of a complete recovery, which I believe to be a rare event.

On the other hand, some cases, where I suppose the cornual destruction is great, from the outset do badly; and are followed by extensive contractions and deformities, which leave the child a complete cripple. In such a case a hopeful opinion leads to disappointment and chagrin for all hands.

Speaking on this point, Gowers says: "An answer cannot be given until the end of the first week or ten days, and then only by means of an electrical examination. Whatever muscles at the end of that time have lost faradic irritability will certainly waste and remain for a long time paralyzed. On the other hand, if there is no loss of irritability at the end of ten days, but it is apparent at the end of a fortnight or three weeks, the wasting will be slighter in degree, and considerable ultimate recovery may be looked for, even in the most affected part.

"When there is no loss of irritability, the paralysis will pass off in the course of a few weeks, or at least of a few months. Where irritability is lost early, the wasting will be rapid and great; the paralysis will last for several years, and it is unlikely that perfect recovery will take place."

From these remarks we see that it is unsafe to give a decided opinion as to the future, until an examination by electricity of the wasted muscles shows us in which of them we may expect recovery, and in which one of them more or less permanent paralysis.

In the commencement of my paper I called this an unsatisfactory disorder; and, as far as my experience goes, the complete cure of the paralysis is so rare an event that I think it may fairly be placed in this category.

Unsatisfactory, too, have been the therapeutic effects of any or all of the drugs I have seen given. Certain it is that the large ganglionic nerve cells in the anterior cornu being destroyed, we cannot replace them by the use of drugs, nor can I see how they may be restored by galvanism applied to the spinal cord.

During the febrile stage, antipyretic measures should, of course, be employed, and counter irritation, by mustard poultices, ice-bags, etc., is, I believe, useful.

Some authors insist on the necessity of placing the child in the prone position, believing that the dorsal position favors the congestion of vessels within the spinal canal.

In practice, however, it is very difficult to carry out; the child will certainly turn over on its back the first opportunity that presents itself; the parents will assist it in so doing when the doctor's back is towards them, and they will often lie to him when he expostulates; this, at any rate, has been my experience on more than one occasion.

Iron, quinine and strychnine may be given after the muscles begin to show some signs of amendment, with a view to their general tonic effect on the system, but of any systematic remedies, I believe Fellows' syrup of the hypophosphites has seemed to do the most good in my own cases.

With regard to electrical treatment, this should not be commenced till the end of the third or fourth week after the onset, and then all acute symptoms have passed off.

If begun earlier than this, Gowers says it is apt to excite increased excitement in the spinal cord.

The same author thinks that such treatment is in no sense a curative agent, but that its effect on the muscles in causing them to contract,

must have an influence in the right direction upon their nutrition ; and the application need only be made to those muscles in which the faradic irritability is lowered or lost.

In the case I have quoted of the child who was attacked with infantile paralysis on the 12th of July, 1888, the galvanic current was applied three times a week, twice a day, for a period of between three and four months ; together with this treatment, his legs were well rubbed night and morning, by his mother, with salt and water and a rough towel, the only medicine taken being Fellows' syrup.

He is now able to walk and run, but somewhat haltingly, the right foot showing a slight degree of talipes-varus, and the calf of the right leg measuring just one inch less than that of the left.

The wasted muscles are still being subjected to a nightly shampoo, and a boot, with a support, has been ordered, to counteract the tendency to club-foot.

Massage, kneading, and shampooing of the muscles of the affected limb, I believe to be the most effectual means at my command of restoring power, and of obviating deformities. The difficulty in this form of treatment is that its application requires some knowledge of massage, or of methodical rubbing, not always obtainable ; any rubbing practiced should be towards the centre so as to propel the flow of venous blood.

The dry hand is said to be the best for this, but I have employed inunctions of cod liver oil, believing that mal-nutrition of any form indicates its use, and I think with benefit to my patient.

The blueness and coldness of the limb calls for artificial heat, which may be afforded by wrapping it up in thick cotton batting, after it has gone through its seance of galvanism or massage.

In conclusion, I think we shall all agree with a distinguished author, who closes his chapter on this subject with this word of caution : " Much patience and perseverance are required in the management of these cases through their long and tedious course."

DR. ELLIOTT, of Toronto, has gone to Europe to spend a few months.

CASE OF INTRA-CRANIAL TUMOR.*

BY W. B. THISTLE, M.D., L.R.C.P. LOND.,
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AND JOHN CAVEN, M.D., L.R.C.P. LOND.,
Pathologist to the Hospital.

J. S., æt. 10 years, admitted to Hospital for Sick Children, Toronto, Jan. 3rd, 1890. This patient was brought to the H.S.C. to obtain treatment for supposed stomach trouble, having for some time been unable to retain food, vomiting coming on at once after eating. For several weeks he had been dull and stupid, showing no inclination for his usual games, etc. He also complained much of frontal headache. Ten months before admission to hospital had had one or more fits.

Present condition. The boy is well nourished and healthy in appearance. He has a blank expression in his face and pays little attention to surroundings. Questions have to be repeated several times before an answer is received. Answers are correct. His gait is peculiar, the patient staggering sometimes to right, sometimes to left side. Pupils are slightly dilated, but equal. Reaction to light is normal. No squint is present. The boy lies curled up in bed with his face downwards, and holding his head in his hands. Patellar reflexes are exaggerated, abdominal reflex present. Testicles are drawn up to external rings ; abdomen is flat and hard. The skin is harsh and dry, the papillæ standing out prominently (*cutis anserina*). Vomiting occurs a few minutes after eating, the act of vomiting being easy. The bowels are constipated. Heart sounds normal and regular, rate 64 per min. Breath sounds normal, rate 16 per min. Temperature 97.4. Lymphatic glands nowhere enlarged. Sensation is normal.

NOTES TAKEN DURING STAY IN HOSPITAL.

Jan. 4. Retained dinner, bowels moved. Patellar reflex absent. Abdominal and cremasteric reflexes present. Blister applied to nape of neck, and mixture of maltopepsin, nux vomica, and infusion of calumba given.

Jan. 7th. Vomiting continues; cannot find his way back from bathroom, although he goes there by himself.

Jan. 9th. Convulsive seizure, nurse says, " He became quite stiff and his eyes fixed."

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*Read before the Pathological Society of Toronto.

Jan. 23rd. Food retained ; pupils unequal, right larger than left; both react to light.

Jan 26th. Convulsion ; general tonic spasm lasting a few minutes, complete opisthotonos ; during spasm eyeballs jerked from side to side ; unconscious (12.30 p.m.)

Slight nystagmus present ; movement being lateral (9.30 p.m.) Staggers more to-day ; pupils equal.

Feb. 3rd. Had three fits, two close together, third an hour and a half later ; opisthotonos with jerking of eyeballs and congestion of the face. Right pupil twice as large as left. Hyperæsthesia marked, but patient is able to distinguish sensations. Tâches cérèbrales marked. Urine passed in bed. Can be aroused only with great difficulty.

Feb. 4th. Internal strabismus of right eye.

Feb. 6th. Evidently blind; very stupid, giving same answer to all questions.

Feb. 7th. Convulsion, opisthotonos, etc., as before.

Feb. 12th. Internal squint of left eye—right eye normal.

Feb. 19th. Convulsion to-day, right pupil larger than left, unable to stand ; if left unsupported, he stands with feet apart, and sways back and forward, finally falling backwards ; is somewhat cataleptic. Muscular power remains good.

Feb. 22nd. Very stupid ; squint in left eye, pupils react to light ; slight convulsion as before ; double optic neuritis present.

Feb. 25th. Complains if bed is jarred, putting hand to forehead ; squint in left eye, nystagmus present, slow and lateral ; urine and fæces voided in bed.

March 10th. Fit ; spasms both tonic and clonic, and so differs from previous ones ; no opisthotonos nor frothing at mouth. Respiration sighing and irregular.

Mar. 21st. Three fits ; tonic spasms, very severe.

Mar. 23rd. Breathing irregular, long pauses between inspirations ; abdomen retracted.

Mar. 29th. Difficulty with food, which accumulates beneath lips.

Mar. 30th. Tonic spasms for four hours, frothing at mouth, pupils contracted, pulse 200, respirations 40. This condition passed into coma, and Mar. 31st, death supervened at 9 a.m.

The diagnosis in this case was intra-cranial tumor, probably cerebellar or pressing on the cerebellum, and in all probability interfering also with the corpora quadrigemina.

The autopsy showed that the diagnosis was correct and that the localization had been almost exactly accurate. The growth, which was as large as a good sized hen's egg, lay upon the crura cerebri, and was bounded by the third ventricle in front, and the middle lobe of the cerebellum behind. Superiorly it was partly covered by the velum interpositum. The corpora quadrigemina and pineal gland appeared to have been completely destroyed, the new growth taking their place. The middle lobe of the cerebellum was also damaged, and perhaps the lateral lobes also slightly, by pressure. The growth proved, when examined microscopically, to be an alveolar sarcoma. The stroma forming the alveoli was evenly arranged in fairly broad bands, which in many places were richly nucleated, the cells represented by the nuclei not being distinguishable. The cells contained in the alveoli were large, spherical, epithelioid cells ; the nucleus, however, in most of them, was large, filling out the cell as commonly seen in round cell sarcomata. Blood-vessels were numerous, in some cases running amongst the cells. Occasionally processes of connective tissue were to be seen entering the alveoli from the stroma, and running amongst the intra-alveolar cells. A considerable quantity of fluid was found in the ventricles, but not sufficient to cause any appreciable flattening of the convolutions. The other organs of the body showed little noteworthy, except lack of nutrition. Subpleural ecchymoses were found in the lungs, accounted for by the condition of respiration shortly before death. On the free border of the liver was found a light whitish-yellow patch, extending back into the liver substance for about ¾ of an inch ; it was perhaps 1½ inches long. It was perfectly smooth, causing no puckering or raising of the surface—the change in color being the only peculiarity. This white wedge on microscopic examination proved to be fat. Every trace of liver substance had disappeared, and its lobules had been entirely replaced by fat. The surrounding liver tissue was not fatty to any extent. The reporters have noticed such patches in the liver—always on the free border—in a number of cases, and are at

a loss for an explanation of their causation. Possibly the cause is some localized interference with blood supply; producing a local anæmia and consequent fatty change.

From a clinical standpoint, this case is interesting, mainly on the account of the fact that the symptoms allowed of such accurate localization. The localization was based upon:

(*a*) Staggering gait, swaying when standing, and finally falling backwards. These point to the cerebellum as seat of lesion.

(*b*) Character of convulsions, tonic spasms, pointing to cerebellum.

(*c*) Irritation of corpora quadrigemina in monkeys produces similar convulsions.

(*d*) Sudden supervention of blindness points to injury of corpora quadrigemina.

Selections.

TREATMENT OF GANGRENOUS BOWEL IN STRANGULATED HERNIA.

BY FRANCIS M. CAIRD, F.R.C.S., EDIN.,
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When about to discuss the treatment which should be carried out in a case of strangulated hernia with gangrenous bowel, it is well to note the more usual sites and extent of the gangrenous areas. We may do this by observing the state of the bowel when exposed during operative interference, or by the examination of museum preparations. Femoral hernia, more especially, affords us an opportunity of inspecting good examples of this condition.

In regard to the question of position, it would appear, from a study of the preparations and cases, to which I have had access, that we may find changes of a gangrenous nature situated as follows:—First, on opening the sac, and within it, a projecting knuckle of bowel may be met, gangrenous on its free border. Second, in dividing the constriction at Gimbernat's ligament, a similar condition may be found immediately beneath the point of stricture. Third, on pulling down the dilated vascular gut from out the abdominal cavity, it may be found damaged above the entrance into the sac. Fourth, but rarely, there may be a gangrenous patch on the collapsed portion within the abdomen beyond the sac. It seems that necrosis may occur at any one, or even at all of these points.

If we now remove the bowel, and spread it out so as to expose the gangrenous areas more clearly, we note that, if several be present, they occupy the positions already indicated, and are separated from each other by a distinct interval of comparatively healthy tissue. In regard to the extent of the necrotic change, we may note that the area which lay beneath the constriction is more or less annular in form. It resembles a signet ring, the bezel towards the free convex border of the gut and the ring, more or less complete, narrowing and tailing off towards the mesentery.

The patches at the remaining sites are all more or less oval, run in the long axis of the bowel, and lie opposite to the mesenteric attachment. Their extent will naturally vary with the duration and circumstances of the hernia.

As to the treatment of the constricting agent, when one meets with gangrenous bowel in a hernial sac it is evident from what has already been adduced, that it must be divided in order to judge of the condition of the bowel beyond. And in cases where the bowel has already ruptured, a stream of antiseptic lotion may be employed to thoroughly wash away fæcal extravasations, and to disinfect while the stricture is divided.

There is now a choice of treatment. If the gut has not yet actually given way, the surgeon may return it, hoping that within the peritoneal cavity there is still a remote chance of its recovery. Or, again, he trusts to the local paralysis preventing it from straying far from the wound, he hopes that local adhesions and effusion may shut off the damaged gut from the peritoneum, and that if, after all, death of the part should take place, that in this fashion general infection may be prevented, and at the outside only a fæcal fistula ensue. Again he may prefer to stitch the gut to the wound, thus forming an artificial anus. Or, again, he may venture to carry out the more heroic resection of the gangrenous gut, and by suture restore its continuity.

I would venture to add yet another method which, under certain circumstances, might prove highly serviceable. It is, that in place of making an artificial anus, or practising resection, we should close the rupture in the gut, or prevent

its formation by inverting the dead or dying tissue, and suturing the sound wall of the bowel over it. The invagination thus carried out will be at the expense of the circumference of the gut, and must, of course, leave a somewhat diminished lumen.

The gut should be withdrawn, and closure effected by means of Lembert's suture. The needle must enter healthy tissue, and emerge in tissue that is fairly healthy, and the stitches should begin above, and end beyond the gangrenous area, just as in suture of a ruptured bladder. The invaginated portions subsequently slough, and are passed by the natural channels.

The method is chiefly applicable to the small gangrenous areas which lie in the long axis of the gut. It might also save resection in bullet and other wounds of intestinal tract. It can be carried out rapidly, there being nothing to cut away, and therefore no hemorrhage to control. The stitching is rendered much less troublesome by the use of Dr. J. M. Cotterill's intestinal needles.

We have, however, to ask what evil results may follow from such treatment. One dreads the formation of a stricture. However, in the case of suture in the *longitudinal* axis of the gut, where not more than one-third of the circumference is included, one would probably have little to fear on this score. Little or no contraction is likely to follow after the primary suture. And, again, if we are dealing with the small intestine, the fluid character of the contents is not likely to give rise to much trouble, even with a somewhat narrowed lumen. On the other hand, where there is a damaged *ring* of tissue, general contraction giving rise to a marked stricture often ensues. Such a ring of dying tissue presents the appearance of a piece of gut pulled down after division of the stricture in a femoral hernia. The damaged hernia resembled a piece of wet wash leather.

The patient suffered from strangulated hernia, and made a favorable recovery from the operation. Progressive symptoms, indicative of stricture followed, interference was not permitted, and seven months after the original operation the preparation was obtained. Such an event is indeed to be dreaded. But are we here more justified in looking for the formation of stricture after invagination of the necrotic area and suture than after an ordinary resection? Our hope is that the invaginated portion may at once slough and be cast off; that the suturing may indeed complete the necrosis, by cutting off the blood supply of the invaginated part; and that as the slough is cast off, a natural cure, similar to that seen occasionally in intussusception, may be brought about.

The method described then, is an attempt to apply Nature's teaching. To what extent we may venture to diminish the lumen of the bowel, can only be learned by vivisection, or the study of cases in man. In every case a careful selection of some one of the various plans of treatment must be made, and this can only be determined by the condition of the patient generally, the local state of the parts, and the resources of the surgeon.

The following are a couple of cases in which suture of the gangrenous gut was followed out:

Mrs. M. was seen by Dr. Alexander Edington on a Sunday morning, suffering from a strangulated hernia, which had been "down" since Friday. Taxis having proved unsuccessful, herniotomy was carried out with the aid of Dr. Edington and Dr. Milligan. The sac contained straw-colored fluid, and the gut was not deeply congested. On division of the constriction at the neck, and on pulling down the bowel, a couple of rents came into view, with ragged, everted edges. There was no fæcal extravasation. The parts were invaginated and sutured with catgut, as described, under antiseptic precautions, the bowel returned, and the wound closed. The patient made a good recovery, and since that date has enjoyed good health, and the intestinal functions are perfect.

No other suitable case for suture presented itself until 1889, when I saw, at her own house, Mrs. C. She had a pinched, worn look, suggestive of peritonitis. There was continuous fæcal vomiting. The home arrangements not proving suitable, she was removed to the Royal Infirmary, and there operated on. The sac contained brownish fluid, a tag of omentum, and a knuckle of gangrenous bowel. The gut was deeply congested. An ovoid longitudinal area opposite the mesenteric attachment was greyish white, flaccid, and lustreless, but had not yet given way. Gimbernat's ligament was knicked, the gut pulled down, the omental tag returned, and the

dying area turned inwards, sound tissue being brought to sound tissue by interrupted sutures. Since the inverted tissue in which the sutures were planted seemed in a very doubtful condition, and since the bowel contained fluid contents, it was deemed advisable to apply a second layer of continuous Lembert sutures over all. The finest Chinese silk was used, and rendered still finer by splitting it up into fibrils, so that the sutures were as delicate as gossamer. This procedure allows one more readily to thread Dr. Cotterill's needles.

No attempt was made to attain a radical cure. Horsehair sutures were inserted into the lips of the wound, but were not tightened. On the third day, all having gone well, the horsehair was tightened, and the wound was closed. The patient did well, passing wind about thirty hours after operation.

At the end of three weeks she was about to be sent home, when she complained of much morning sickness. She was in the third month of pregnancy. The sickness and nausea continued with intermissions. She had attacks of vomiting. At no time was there any obstruction —wind always passed freely. The bowels required an enema to empty them. There was at no time any abdominal tenderness, or pain, or swelling in the region of the cicatrix. The abdomen was always lax, and moved freely during respiration. The unsatisfactory state of affairs continued, and it was thought advisable to explore, when she suddenly had an attack of diarrhœa, passing most offensive motions; the heart's action, always weak, became very irregular, and she sank four weeks after the operation.

At the autopsy there was not the slightest evidence of peritonitis. A loop of ileum was fixed to the internal aspect of the crural ring, and crossing it anteriorly, attached to the same point, lay the tag of omentum which had been seen during the operations. This had evidently acted as a constricting band. The gut was intact. On removal, the bowel was laid open. A pyloric-like ring of constriction, which could only admit the little finger, showed the site of the operation. Immediately above it the mucous membrane was distinctly ulcerated, and thus the diarrhœa was accounted for. The heart showed marked fatty degeneration.

It is noteworthy that we found here a short localized general contraction, instead of a lumen only narrowed slightly for about an inch in length. The success of the first case was, however, so marked that one felt encouraged to carry out similar treatment in the second instance, although the unfortunate result shows that the vitality of the gut had been too greatly lowered. It is probable that a reactionary congestion and inflammation set in beyond the range of the sutures, and that the subsequent cicatrization of the effused products, more especially in the infiltrated sub-mucous tissue, gave rise to the contraction. Contraction may occur with great rapidity. In the museum of the Royal College of Surgeons there is a preparation showing a strictured gut, which barely admits an ordinary lead pencil, and which was found formed nine days after the reduction of a strangulated femoral hernia.—*Edin. Med. Jour.*

EMPLOYMENT OF SUGAR IN WOUND TREATMENTS.—By Dr. Jacob Dannheiser.—F. Fischer, of Strassburg, in 1885, introduced sugar as a wound dressing, claiming for it special advantages. The author, in an inaugural dissertation, shows that, in spite of the ever varying changes which the special means employed by surgeons in the carrying out of the antiseptic idea, have undergone, this agent is that employed at the Strassburg clinic. The sole change, and one of great importance, is the omission of the impermeable covering formerly employed; the result being that the sugar does not break down so readily into a liquid condition and a condition of dryness of the wound is maintained. The sugar is incorporated in cushions combined with wood, wool, etc., when profuse wound secretions occur. It is also used as a powder application to ulcerated surfaces, with the happiest results. It is contra-indicated in cases of cavities left after resections, and where there is secondary hemorrhage, iodoform gauze tampons being here substituted.—*Deutsch. Zeitschrift. f. Chir.* Bd. xxix. p. 311.—*Annals of Surgery.*

ECHINOCOCCUS HEPATIS; EXTIRPATION WITH PARTIAL RESECTION OF THE LIVER.—By Vohtz, Aarhus.—A woman, æt. 21 years, had observed a tumor in the abdomen for some nine years. This had rapidly increased in size after a second confinement, eleven months before. There was

found a sphere-like, smooth and tensely fluctuating tumor extending below a line drawn from one iliac spine to another and above not to be separated from the liver. It was the size of a child's head, easily displaceable to either side or upward, and but little downward. It had no connection with the sexual organs. It was diagnosed as an omental tumor, on account of its great mobility, and laparotomy commenced, when an echinococcus, occupying the lower and posterior surface of the liver, was revealed. It was excised, and with it a part of the greatly atrophied hepatic tissue was removed. The large and not greatly bleeding wound was united by a strong continuous suture, so that a crest-like elevation was the result, and the abdominal wound was closed. Recovery was uneventful, excepting a slight increase of temperature during the first days after the operation.—*Hospitals Tidende*, 1889, 22-610-612. —*Annals of Surgery*.

UNIVERSAL ALOPECIA IN MIDDLE AGE, WITH HISTORY OF SEVERE RINGWORM IN CHILDHOOD. —A lady, aged 45, who was sent to me by Mr. R. H. B. Nicholson, of Hull, was absolutely hairless. She had in the course of about a year lost all her scalp hair and that of her eye-brows, eye lashes, axillæ, pubes, and limbs. She assured me that she had not a hair left. The alopecia had begun in the usual way by patches on the scalp (one on the vertex and one on the occiput), which for some months did not spread much. Then occurred a sudden accession of severity, and the hair fell, she said, with most astonishing rapidity until all was gone. Although she considered that she had been out of health, and had suffered from "nerve shock," I could find nothing special. She was florid, and looked well. She had been liable, like most other people, to headaches, but curiously they had been quite in abeyance during the time that the hair was falling. She had been well treated in the early stages by means of blistering, etc., but nothing had seemed to do any good.

I, of course, asked as to ringworm. "Oh, yes," she replied, "I had it very badly, and my head was shaved four or five times. I shall never forget it." This was about the age of seven. A sister, since dead, had ringworm at the same time.

It will be seen that in this case the interval between the cure of the ringworm and the beginning of the alopecia was probably not less than thirty years.—*Jonathan Hutchinson in Archives of Surgery*.

JOHNSON ON POISONOUS EFFECTS OF EXALGINE.—The patient, a medical man between forty and fifty years of age, was suffering from pain in the lumbar and iliosacral region, for which, one evening at 9:30 p.m., he took one grain of exalgine; at 10:15 p.m., not feeling any relief he took two more grains in a little whisky. Shortly afterwards he complained of giddiness, and said that his head felt so large that it seemed to occupy the whole room. He continued, however, playing cards till 11 p.m., when, without warning, he collapsed and was unable to speak or move, and lay gasping for breath. He continued in that state over half an hour, when he was able to speak a little, and said that each breath was a fearful effort; he was carried up to his bedroom, and placed in an arm chair, as he was unable to breathe lying down. He then got worse again, his breathing being especially distressing, and somewhat resembling that of a person in an attack of asthma. His respirations were thirty-eight shallow, pulse rather weak, body surface cold, but not cyanosed. Two hours later he got some relief after vomiting, and he then suffered from dysuria; an hour later he was able to go to bed, and slept well. He afterwards stated that during the dyspnœa he had a feeling of numbness all over, and felt as if his diaphragm had stopped working. Next morning he was slightly jaundiced, but in other respects quite well. [*Rep.*—As these effects have not been observed in any other recorded cases, they were probably due to idiosyncrasy].

ALLEN ON DIABETES MELLITUS IN CHILDREN. —Dr. Allen reports two cases of diabetes occurring in children. The first case was a boy, aged three and a-half years, a very bright child, who had previously enjoyed good health—his father and mother were healthy, but the latter somewhat nervous. The patient, six months before being seen, was noticed to pass an unusual quantity of urine, occasionally wetting the bed. He was now weak and peevish, very thirsty, skin dry, limbs cold, and was passing four quarts of urine in twenty-four hours;

the specific gravity was 1028, and it was found to contain sugar. A week later the patient had lost flesh and strength, and had taken to his bed, and slept most of the time, being very intelligent when aroused. He was not very thirsty, but was very hungry. He rapidly failed and died, living only about seven months after having first been noticed to pass more urine than natural. At the post-mortem there was some increase in the amount of subarachnoid fluid, and slight opacity of the lining membrane of the lateral ventricles of the brain. The brain was unusually large. The second patient was a boy seven years old, father and mother healthy, but his great-uncle and two great-aunts had died in middle life of diabetes. During the past six weeks the patient was languid and thirsty, rising many times each night to micturate. His appetite was excessive, but he was very thin. Three quarts of urine were passed each day. Specific gravity 1040, containing a large amount of sugar. This patient died about three months after he was first seen [Diabetes in children, according to West, is very rare; he quotes Prout, who, out of his large experience, had only seen one instance of diabetes in a child of five years old, and only twelve in young persons between the ages of eight and twenty years, out of a total of 700 cases.—*Rep.*] *Francis Hawkins, M.B., in London Medical Recorder.*

MANAGEMENT OF SHOULDER PRESENTATIONS.—E. P. Wells *(Am. Jour. Obstet.)* reports several cases of cross-presentation, for the purpose of directing attention to the great advantage of the knee chest position in facilitating the performance of version. The practice is an old but neglected one. What is often a difficulty may thus become an extremely easy operation. The contractions of the uterus are much less powerful in the inverted position. The fœtus gravitates away from the brim, the hand is readily introduced and all the manipulations are extremely simplified. Cephalic version is generally feasible in cases, in which the podalic only would be possible in the dorsal posture. For cephalic version, the manipulation consists in pressing the presenting shoulder away from the brim in a direction toward the child's breech with the internal hand, the other hand assisting by external pressure over the head. The shoulder easily passes out of reach, the head taking its place at the brim. For podalic version the direction of the pressures is reversed, the external hand being applied over the breech. In these procedures the hand is introduced but a very short distance into the uterus. If they fail, which is rarely the case, resort may then be had to the passage of the hand deeply into the uterus for the purpose of bringing down a foot.—*Brooklyn Med. Jour.*

EXPLORATORY LAPAROTOMIES IN INJURIES OF THE ABDOMEN.—*(Revue de Chirurgie,)*—Since May, 1888, Postempski has performed twenty laparotomies for different abdominal injuries, and has only lost three patients. The injuries are classified as follows:—Eight cases of penetrating wounds of the abdomen, with protrusion and probable injury of intestines, six cases of wounds of intestine, four cases of wounds of intestine and of mesentery, one case of wound of the liver, and one of the bladder. The duration of the operation varied from thirty minutes to three hours. In the three fatal cases, death ensued in one from shock, and in the remaining two from purulent peritonitis, the result of the escape of the fæcal matter. Among the cases three are of special interest:—(1) Transverse wound in the right hypochondrium. Injury to the liver, very free hemorrhage; operation half an hour after the accident; a vertical incision, extending from the transverse wound; suture of the hepatic wound; removal of a large quantity of blood from the peritoneal cavity; suture of the abdominal wound. Cure in seventeen days. (2) Transverse wound in the hypogastric; protrusion of the large intestine and of omentum; enlargement of the wound, leading to the discovery of four wounds in the intestine. These were sutured on the twentieth day; a small fæcal fistula formed, which, however, spontaneously closed afterwards. (3) Wound in the hypogastric region, with protrusion and injury of the bladder. This was sutured by three planes of sutures, after enlargement of the superficial wound. Disinfection of Retzius' space, into which urine had escaped. Introduction of a Nelaton's catheter, which was left *in situ*. Cure. In all the cases strict antisepticity had been observed, and the fluids employed were boracic acid, salicylic acid,

and a weak solution of sublimate. Postempski is in favor of early intervention in cases of abdominal injuries.—*Postempski in Med. Chronicle.*

THE ANTISEPSIS OF THE RENAL PASSAGES BY THE INTERNAL USE OF SALOL.—In the intestinal tube, as a consequence of the action of the pancreatic juice, salol splits up into carbolic and salicylic acids, which are then eliminated by the kidneys, carbolic acid unchanged, salicylic acid after combining with sodium. Nencki, Sahli, and Lépine having proved this beyond contradiction, as a consequence, recommend its internal use in "internal disinfection" in cholera, typhoid fever, and bacterial diseases. Dreyfuss, bearing these facts in mind, has recommended its use internally as a means of inducing the passage of an antiseptic fluid, through the kidneys, ureters, bladder, and urethra; and claims that it acts in a much more intense manner and covers a wider field than can be accomplished through an injection of antiseptic fluid. Sahli further has shown that the urine of patients who have taken salol internally is aseptic, and that salol in large doses is well borne and never produces toxic symptoms. It is, therefore, quite as suitable for producing antisepsis in the urinary passages as naphthol for antisepis of the intestinal tract. Dreyfuss has employed salol, either alone or with various balsamics, in blennorrhœa, the full dose varying from 75 to 120 grains. Even in acute cases, treated at the very outset, this mode of treatment rapidly diminished the secretion and in some few cases arrested it within a few days. Its effects are especially marked in combination with the use of cubebs or copaiba.

Finally, Dreyfuss recommends this use of salol in operations upon the urinary organs, for in this way the urine is kept aseptic, and the source of danger is thus avoided.—*Americ. Practitioner and News.*

HERPES TONSURANS WHICH HAD TRAVELLED FROM THE SCALP TO THE SKIN OF THE HAND (TWO CASES).—I have just seen a case of ringworm on the hand of a boy which has interested me. The lad was brought for "eczema," and all that he had to show was a narrow line of slight redness with exfoliation, which crossed the back of his hand and extended upon his thumb. All the rest of his skin was quite healthy. My attention was attracted to the abruptness of the line, and the circumstance that it presented the appearance of a number of curves joined together. It was, in fact, like a part of the edge of a large patch of eczema marginatum as we sometimes see it on the inside of the thigh. I never, however, saw the latter with such a very insignificant border, or with such perfect soundness of the skin which had been abandoned. Knowing, however, of no skin eruption excepting ringworm which can take the form of a narrow advancing border alone, I at once suspected this disease. It was difficult to get anything for the microscope, for the hairs were very small and the desquamation very little. However, using a lens, I picked off a few scales, and pulled out a few hairs. At first there appeared to be nothing. The hairs were as transparent and as smooth as possible, and nothing like a broken one could be seen. after a little search, however, plenty of fungus was found in the form of long monilliform threads clinging to the roots of the hairs. The common condition was jointed threads, and for the most part outside the hairs. There were but few groups of spores.

The history given was that the boy had suffered from ringworm of the scalp six months ago, which had been well cured. Ever since, however, a slightly marked eruption had been slowly travelling down his arm, of which what I saw was the remains. A portrait of the hand was taken by Mr. Burgess for the College of Surgeons collection.

A few days after I had seen this case a somewhat similar one presented itself in a little girl, whom I had myself treated for ringworm of the scalp. All that remained in her was the patch on the back of one hand.—*Jonathan Hutchinson in Archives of Surgery.*

CRISLER(J. A.) ON HOW IRON ACTS IN ERYSIPELAS.—Erysipelas is essentially a constitutional disease with local manifestation, more or less self-limited, and dependent upon the streptococci erysipelatosi for its existence as a disease. The most settled fact we have in the limits of bacteriology, is that Fehleisen of Berlin, isolated, proved, and named the above germs. Fehleisen demonstrated that these mi-

crobes, if let alone in the bloo ', will not die unti they have attacked the tissues and split them up, making the tissue give up its oxygen, and the element itself combines with the nascent oxygen, and dies. He further proves that in the zone of infiltration these organisms are dead, and to obtain viable ones it is necessary to go to the area of healthy tissue. If we accept these statements as facts there remains but one broken link: since we know that these elements do not die till they are combined with oxygen, and that usually they get the oxygen by the tissue change they produce, the question arises, Does the oxygen that the hematin causes to enter the blood combine with these ptomaines or not? Certainly it seems plausible, and in fact reasonable, from a chemical standpoint at least. We have that law laid down before us in every object in nature. "Unlikes attract and likes repel e ch other." Through the influence of iron (and it is iron alone and not the chlorine in the tincture, for we could not get enough chlorine in the blood to act antiseptically without producing the death of the amimal) we crowd into the blood nature's own germicide, oxygen. This oxygen, like that found in the peroxide of hydrogen, comes in with outstretched arms as it were, unsatisfied and surrounded by all the environments necessary to unite with an electro-positive element, and it is but the fulfilment of chemical laws when it does unite. Even in plethoric people iron alone gives the best results. Iron should be given first, last, and all the time in this disease. The room should be well aired, and besides, a small quantity of oxygen should be continually generated therein.—*Memphis Med. Jour.*, April, 1890.

EUCALYPTUS IN CATARRH OF THE RESPIRATORY TRACT AND OBSTINATE COUGH IN CHILDREN.—For several years I have been in the habit of using preparations of eucalyptus, both internally and by inhalation, in the treatment of certain cases of acute and subacute bronchial and laryngo-tracheal catarrh, more especially in children. For inhalation in diphtheria, croup, laryngitis, whooping-cough, and phthisis, I prefer eucalyptol; but for internal use in bronchial and laryngo-tracheal inflammations the fluid extract seems to serve a better purpose. In acute cases my usual custom is to administer it in connection with ammonium salts; in subacute cases a little paregoric may be advantageously added. In the obstinate irritative coughs following inflammatory affections, which have apparently subsided, the fluid extract of eucalyptus is best given without other drug, in syrups of tolu and acacia, or in an emulsion of oil (castor oil, olive oil, cod liver oil, almond oil), as necessary to disguise its taste or modify its action. The dose is about five drops for a child of two years. The following are specimen formulæ:

℞.—Ammonium carbonate, 8 to 16 grains.
Ammonium chloride, 22 to 48 "
Fluid extract of eucalyptus 1½ f ʒ.
Syrup of acacia, ½ f ʒ.
Syrup of wild cherry, *or* / Glycerine, *or* / Syrup of tolu } ½ "
Water, sufficient to make 2 fluid ounces.

For a child two years of age, with acute bronchial or laryngo-tracheal catarrh, one fluid-drachm in milk or water every two, three, or four hours.

℞.—Aromatic spt. of ammonia / Camph. tincture of opium } of each 2 f ʒ.
Fluid extract of eucalyptus 1½ f ʒ.
Syrup of acacia / Syrup of wild cherry } of each ½ f ʒ.
Water, sufficient to make, 2 f ʒ.

For a child with subacute bronchial catarrh, one fluid-drachm in water, every two, three, or four hours.—*Solomon Solis-Cohen, M.D., in Med. News.*

A SUBSTITUTE FOR POST-MORTEM CÆSAREAN SECTION.—Passing through the wards of the Philadelphia Hospital about a year ago, when not on duty, my attention was called to a dying woman in the last month of gestation, lying in the laparotomy-room, surrounded by a group of resident physicians, who were waiting for the moment of death, that one of their number might do a post-mortem Cæsarean section. The woman evidently had but a short time to live; there was no pulse at the wrist; the death rattle sounded in the throat; the eyes were opened, insensible and glazed. The fœtal heart-sounds, curiously enough, were still quite distinct and regular, and active fœtal movements could be seen and felt. In view of the child's good condition, and of the possibility that in the woman's lingering death the fœtus might die before its mother, I advised the resident-physi-

cian in charge of the case to dilate the cervical canal with his fingers, insert his hand, and do a version followed by immediate extraction; surmising, as it proved, correctly, that the tissues of the dying woman could offer no resistance to these manœuvres. Although there was not the slightest dilation of the os when the operation was begun, Dr Sharpless, the physician in charge, extracted the child in less than five minutes. It was born alive, and soon cried lustily. It lived a week, I believe, and died of some condition independent of the manner of its birth. The woman's death, a short time after delivery, was certainly not hastened by the operation; in fact, she seemed a trifle better after it. At the post-mortem examination meningitis was found to be the cause of death. When the procedure, just described, is at all possible, I believe it should always be preferred for post-mortem Cæsarean section. By waiting for the mother's death, one may lose the infant as well; the post-mortem is a disfiguring and bloody operation, which would horrify the friends of the patient, and for which their consent could not always be obtained; and, finally, there is the alarming suspicion entertained by the by-standers, if not by the physician, that the woman might not have been dead, but was killed by the operation. On the other hand, version and extraction are as quickly done as section, if one can judge by this single experience; the child is rescued while it is still in good condition; there is nothing repulsive about the operation to the bystanders, and death is not hastened by it.—*Barton Cooke Hirst, M.D., in Med. News.*

ACUTE ASCENDING PARALYSIS.—Carter reports in *Brit. Med. Journal*, May 17, the following case of Landry's paralysis, which terminated in complete recovery:

J. R., æt. 25, railway stoker, married, consulted physician July 19th, complaining of sore throat and aching pains in limbs; nose had bled several times during few days; temperature, 99°; patient looked healthy, was temperate; had no venereal disease; had, in fact, always enjoyed good health, with exception of an attack of typhoid fever, when ten years of age.

July 22nd, complained of increased sensation of weakness; sore throat is gone. Complains of pricking and numbness in arms and legs. Could not lift shovel with coals, although he could hold the shovel in his hand.

July 25. Looked pale and ill. Movements slow. No inco-ordination. No difficulty with speech. Great weakness of limbs, and pricking sensations increased.

July 27. Unable to stand; vomited. Temperature normal; pulse rapid. Sweating freely; expression anxious, and face pale. Sensation was unaffected. With support on each side he had to shuffle one leg in front of the other. Bladder and rectum not involved.

August 2nd. Condition worse. For a few days has complained of difficulty in swallowing. Cannot now swallow fluids even. Dyspnœa very great. Patient is unable to move from side to side; his arms are perfectly powerless; legs motionless and flaccid; pupils widely dilated; pulse extremely rapid and irregular. The head was thrown back, causing paralysis of muscles of the neck. There was no retention of urine. He had a desire to defecate but could not; voice is a hoarse whisper.

August 3rd. Condition continued about the same. Nutrient enemata given.

August 4th. Improvement in swallowing, and respiration. He drank a quart of milk. Voice became stronger. Pulse became slower. Four days afterwards he was able to swallow bread sops.

Recovery of paralyzed parts continues from above downwards. Pupils contract; can support head. At the end of another week he can move the fingers a little, and arms and shoulders recover power gradually. The legs were the last to recover. They did so about a fortnight later than the arms. In six weeks patient was out of bed, and continued to regain power until in October he had full power, but was somewhat thin and weak. In December the patient was about to return to his employment as a stoker.

The reporter of the case considers that the paralysis is due to the pressure of effusion into the central canal of the spinal cord, the effusion being the result of chill. W. B. T.

RESULTS OF THE NON-OPERATIVE TREATMENT OF FRACTURE OF THE PATELLA.—By Dr. W. T. Bull, New York.—The author presents the results obtained by him in the treat-

ment of sixteen cases of primary fracture of the patella, and six cases of refracture. His treatment had consisted in the use of plaster-of-Paris bandages after the effusion had subsided, with the application within the splint of adhesive plaster strips to steady the fragments. After six and eight weeks this splint was removed, a posterior splint applied, and the patient allowed to walk. For the next month or six weeks the posterior splint is always worn by day, the thigh and knee are vigorously shampooed and kneaded, but care is taken not to flex the joint and thereby stretch the ligament. At the end of three months, the patient is usually able to bend the limb but slightly, but the power of extension is good. Occasionally the splint is worn for a fourth month. Gradual increase of the use of the limb without further support is encouraged from this time. Passive motion is undesirable.

As regards the functions of the limb, Bull reports the result to have been functionally perfect in ten cases; that is to say, the flexion and extension of the limb has been complete and strong, and the ligament firm, with little or no atrophy of the thigh. In four other cases flexion and extension has been imperfect, but the joint has subserved all the needs of the patient. In the two remaining cases there resulted no power of extension whatever, and the patients were compelled to wear supports or walk with a cane.

As regards the character of the union in the fourteen perfect and fairly good cases, it was believed to be bony in one instance; in two there was no appreciable separation of the fragments; in the remaining cases it varied from one-fourth inch to one and one-fourth inch, the average being nine-tenths of an inch. In the two bad cases, the ligament was one-f urth of an inch in one case, and one and a half inch in the other. In the six cases of refracture, in two excellent functional power was regained, one with a ligament of one inch, and the other with one of an inch and a half in length. The four remaining cases of refracture remained deficient in power of extension with ligaments from one and a half to five inches in length.

The author emphasizes the need of stimulating the development of the quadriceps. He advises that in case the ligament and joint functions begin to weaken after the sixth month, wiring of the fragments should be done, but condemns without exception wiring in recent fractures, and challenges those surgeons who resort to the immediate suture to explain by what process of reasoning they can call it a justifiable procedure.

In cases of refracture and of old ununited fracture the author gives a qualified assent to the propriety of wire suture, although suppurative arthritis and abscesses in the thigh, terminating in death, had followed in the only case in which he had attempted to apply the suture for the cure of ununited fracture. In compound fracture wiring is proper. Death, however, resulted in the only case of this kind recorded by the author.—*Medical Record*, March 22, 1890.

TREATMENT OF FRACTURE OF THE PATELLA.—In the treatment of fractured patella there are chiefly two things to do, first extend the leg on the thigh, and so control the position of the lower fragment; and, second, to overcome the action of the extensor quadriceps muscle, and thus regulate the position of the upper portion of the bone. Accessory to this should be the pressure by plain roller bandages over the patella, to prevent tilting or "riding" of the fragments.

This is accomplished in the method under consideration by a light wooden ham-splint, well padded and placed posteriorly over the thigh and leg, from the buttock to the upper end of the lower third of the leg, for extension; and by the application of coaptation splints with buckle straps over the extent of the great patella muscle, the quadriceps. A roller bandage should be placed over the coaptation splints, and buckle straps. As for bandaging over the fragments, this may be practically confined to simple pressure to prevent "riding;" as little can be accomplished with the bone and muscle beneath through the various sorts of traction over the skin, we should avoid pressing the skin down between the fragments. To relax the rectus femoris muscle, which is the portion of the quadriceps having pelvic origin, the leg should be elevated, and that best, perhaps, by placing pillows underneath and tying them in place with strips of bandage passed around the limb and the bed also, if necessary.

This method is best distinguished by its sim-

plicity, and the more direct application of control to the action of the great patella muscle, the contraction of which determines, provided the leg be kept straight, the degree of separation of the fragments. Also by the ease with which the coaptation splints may be tightened by the buckle straps about them, and thus steadily prevent the opportunity which diminished swelling and atrophy otherwise furnish the muscle to contract within a loosening apparatus.

The apparatus, after being worn for four or five weeks or more in bed, according to the nature of the case, is then equally suited to movement about on crutches, and from its lightness is especially well suited to this. After a time, four weeks or more, the coaptation splints may be omitted and the ham-splint alone retained. The latter admits, if not too tightly bandaged, of a slight degree of motion, and the first step in overcoming the joint adhesions is thus safely begun. I have had a patient, thus treated after a muscular action fracture, able to walk well without apparatus at the end of nine weeks. A scarcely perceptibly fragment separation was present. Do not attempt too rapid recovery of the knee motion, and postpone its complete return and unrestricted use even as long as a year.—*Newell in Medical Record.*

DILATATION INSTEAD OF THE SUPPORT OF THE PERINEUM.—The dread of the perineum becoming ruptured during the passage of the child's head lead to the practice of supporting it, and this has been more or less done from time immemorial to the present day. A large midwifery experience convinced me many years ago of the fallacy and danger of this practice; and in a paper read before the Obstetrical Society of London, and published in their *Transactions* of 1875, I recommended a diametrically opposite line of treatment, which is certainly followed by far better results.

Let us consider for a moment the object we have in view—namely: We want the soft parts of the outlet of the pelvis to dilate, so as to allow of the passage of the child's head without its weakest part rupturing. What does support do? It presses the perineum between the hand on one side and the child's head on the other, so that the more support we give, the more squeezed, thinned out, and lengthened the perineum becomes. No wonder, then, that it frequently gives way. One can hardly imagine anything so likely to favour a rupture as this pressure on both sides. True, the support may delay the advance of the head, but this pressure against the perineum rouses the uterus and makes the pains more violent, so that, if delay is the object sought, direct pressure upon the child's head is infinitely preferable, and safer in every way.

In cases of ruptured perineum what has occurred? Either the outlet was abnormally unyielding, or there was not time for it to expand, so that the weakest part gave way. The obvious way of preventing this unfortunate result is to dilate the perineum before the child's head reaches it, and practically this is easily effected. One can readily form an opinion as to the necessity for this proceeding by ascertaining the dilatability of the parts, the size of the outlet, the length of the perineum, and the character of the pains.

If there is reason to believe that the parts will not readily yield to the advancing head, they may be gradually dilated by drawing back and expanding the perineum during each pain, first with two and then with three fingers, and keeping up as firm extension as can be borne short of pain, and continued from time to time until the required amount of dilatation has been obtained.

By this simple proceeding (1) the pains are strengthened; (2) the latter part of labour is materially shortened, and it is far less painful: (3) the perineum is preserved intact.

Fifteen years ago I confidently recommended the dilatation of the perineum as the best means of avoiding the danger of its rupture and of facilitating the latter stages of labour; and further experience fully confirms the favourable opinion I had then formed of its usefulness, and which led me to bring before the profession a mode of treatment which, so far as I know, had not up to that time been recommended.—*H Ernest Trestrail, M.R.C.P., F R.C.S., in Brit. Med. Jour.*

DR. W. G ANGLIN has been appointed Professor of Pathology, and Dr. E. Ryan, Demonstrator of Anatomy, in the Kingston Medical College.

THE

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TORONTO, JUNE 16, 1890.

THE SUMMER SESSION.

After this year, attendance in at least one summer session will be demanded from all candidates at the Council examinations. We hope that the students will find it to their advantage to take the summer sessions. The mere book worm, who, in former times, frequently stood high in the class lists, has now rather a poor chance at our practical examinations. Our students should have ample opportunities in the laboratories and at the bedside. The old-fashioned love for purely didactic teaching has sadly interfered with practical work during the winter sessions in the Ontario Medical Schools. The students, with the terrors of the bedside examinations ever confronting them, fully appreciate this. As an evidence of this we find a large number attending this year's summer sessions, although as yet purely optional.

There are this year no less than sixty-two students in attendance at the summer session of the University of Toronto. It was scarcely thought possible to attract so many to our school without any compulsory enactments. The students are shrewd enough to discover where their interests lie, and to appreciate the great advantages of practical teaching. It has been a difficult matter to make the extra session popular in Toronto, and the few that persisted in their efforts in this direction met with many discouragements. In spite of such obstacles their labors have been crowned with success, and in the future, the summer session will be considered almost a necessity to the student who desires to be properly qualified for his final examinations.

ONTARIO MEDICAL COUNCIL EXAMINATIONS.

The results of the recent examinations of the Medical Council show that that body is determined to do its duty in the matter of keeping up the standard of medical education in this Province. About one-third of the final, and over a half of the primary, candidates were rejected. When we consider the fact that the students as a rule entertain strong fears respecting the examination, and that many of the weaker men avoid it, these percentages of the unfortunates must appear large. For a simple pass examination for license to practice they are large; but we find no disposition on the part of the profession to complain or protest. As a rule the good men are passed and the poor men are plucked; there may be occasional exceptions-but we have reason to think they are rare.

We believe the examiners did their work conscientiously and well. The time allowed for the oral examinations is too short; but for that the Board is not responsible. We hope there will soon be changes for the better in this respect. While it is very desirable to maintain a high standard, the students have rights which must not be ignored, and they should have a fair opportunity to show their knowledge or ignorance, as the case may be. Seven minutes for a trial is not enough time. Not less than fifteen minutes should be allowed. We cannot, however, expect perfection at once; and we are pleased to notice that improvements appear from year to year. The Council has shown a commendable desire to make the examinations as thorough, practical, and fair as possible, and their efforts should receive a general support and encouragement.

NOTES.

THE struggle to obtain degrees for London medical students still continues. Last week the report of the Special Committee on the various proposals which have been made, especially those of the Royal College of Physicians and Surgeons, and of the University and Kings' Colleges, was presented at a meeting of the Senate of the University of London. It is claimed that the London medical students should have an opportunity afforded them of obtaining a

University degree in London, and that the examinations should be of a rational standard, and not of the very high standard which is now demanded by the University of London. The graduates of the University of London naturally object to a lowering of the standard which at present exists.

MR. LOCKWOOD has communicated to the *British Medical Journal* a report of two cases of strangulated hernia which, after operation, he he had treated with the double cyanides of zinc and mercury. In each of these cases there occurred beneath the edge of the dressings a rash of angry-looking pustules, which caused some pain and discomfort. As these were not developed in the immediate neighborhood of the wound, the healing process was not interfered with, and the formation of the pustules do not seem to be more than an inconvenience. It is not at all uncommon to find blisters formed after the application of alembroth gauze, and it was hoped that the double cyanide dressing would prove less irritating. Lister's new dressing, however, seems to have some irritating qualities, and it is, therefore, not quite as satisfactory as we could wish. It is said by Mr. Watson Cheyne that the contents of the pustules above referred to are sterile.

DOCTORS IN THE LOCAL LEGISLATURE.—We are pleased to notice that the doctors did remarkably well in the recent Provincial elections. There will be eleven physicians in the next Parliament: Dr. Baxter, of Haldimand; Dr. McKay, of South Oxford; Dr. Dowling, of South Renfrew; Dr. McKay, of West Victoria; Dr. McMahon, of North Wentworth; Dr. Gilmour, of West York; Dr. Barr, of Dufferin; Dr. Preston, of Leeds; Dr. Willoughby, of East Northumberland; Dr. Wylie, of West Simcoe; and Dr. Meacham, of Lennox. Of these, we understand the first six are called Reformers, while the remaining five are known as Conservatives. Among the defeated candidates there were four doctors, as follows: Dr. Tennant, of South Bruce; Dr. Hunt, of Centre Gray; Dr. Fleming, of West Kent; and Dr. R. F. Preston, of North Lanark.

DR. CANNIFF'S BOOK ON THE MEDICAL PROFESSION IN UPPER CANADA.—We direct the attention of our readers to the Prospectus just issued of the work, by Dr. Canniff, on the early history of the medical profession of this Province, between 1783 and 1850; and we would ask for the book a hearty recognition from our brethren. Dr. Canniff has been engaged for a number of years, as he could find time, in collecting the information and arranging the historic documents which will be found in the pages of the work. The doctor has a taste for old-time lore, and has laid the foundation for the history of this Province in his "Settlement of Upper Canada." This latter work has, we know, been a labor of love, more particularly because it related to his profession, of which he has always been a loyal member. He has not thought of any financial gain in the undertaking. The manuscript is now complete and ready for publication. But the doctor wishes it to be understood that the publishers, Messrs. Williamson & Co., will only proceed with the publication when they have a sufficient number of copies subscribed for to cover the expense. Every member of our profession should feel sufficient interest in the early history of the Province, and of the profession particularly, to cause him to become a subscriber, and we believe the profession generally will respond to the request of the publishers. From the prospectus we learn that the volume will contain about 600 pages, and is divided into three parts. First part: The Pioneer Medical Men, and the several steps taken to establish the profession on a legal basis. Second part: The Proceedings of the Upper Canada Medical Board from its organization, 1819 to 1850; and the College of Physicians and Surgeons of Upper Canada, 1839-41, with references to historical events, showing the growth and development of the profession. Third part: Biographical Sketches of early Physicians of the Province, with many references to early events in the history of Upper Canada. An appendix, containing many historical documents. Biographical sketches are given of 226 medical men, and reference is made to about 600 other doctors engaged in practice before 1850.

DR. W. T. STUART has gone to New York, where he will spend the most of the summer.

Meeting of Medical Societies.

THE PATHOLOGICAL SOCIETY OF TORONTO.

April 26th, 1890.

The President, Dr. R. A. Reeve, in the chair.

UTERINE FIBROIDS.

Dr. Oldright presented two intra-mural fibroid tumors, one of which he thought had undergone osseous degeneration. The other noticeable point discovered during the post-mortem examination was the presence in the stomach of a number of circular depressions, seemingly old ulcers which had healed, the mucous membrane growing over them.

Dr. Acheson thought that the nodule had undergone calcareous rather than osseous degeneration, for under a magnifying glass it presented a broken crystalline appearance. Ossification could not occur in such a place, for where would the osteoblasts come from?

Dr. McPhedran asked if these calcifications are ever crystalline. He had thought that they were always amorphous.

MENINGITIS.

Dr. Oldright presented the brain and cord, the bladder and ureters of an unmarried woman of 34. Dr. J. E. Graham had some time ago seen her in consultation, and thought her to be a masturbator and hysterical. Three weeks after having la grippe, she complained of loss of power in the right arm, which was not entirely imaginary. She then took to her bed. Paralysis of the right leg was next noticed. The catheter was necessitated by paralysis of the bladder. Pains in the head and in the dorsal spine were complained of. In the urine there was an abundance of albumen. On post-mortem examination the meninges were found to be slightly injected, and there was an unusual amount of spinal fluid. The left ureter was very much enlarged, being 1⅓ inches in diameter at its widest point. The wall of the ureter was thickened. The pelvis of the kidney was dilated. The bladder walls were slightly thickened.

Dr. Thistle presented a

TUMOR OF CORPORA QUADRIGEMINA.

(See *ante* p. 276.)

ATROPHY OF CEREBELLUM.

Dr. McPhedran presented a brain, in which the right lobe of the cerebellum was greatly atrophied, being less than half the size of the left lobe. The patient was a man of 26, who had for some eighteen years had epileptic seizures. He was of a dull, heavy, unintellectual cast of countenance. He gave a history of nocturnal attacks. For some two weeks while in the hospital, he was free from seizures and was advised to go home. Constipation was then marked and he was given physic. Some four days before death there came on excessive diarrhœa and incontinence of fæces. Suddenly tympanites came on. For the last two days before death he complained greatly of abdominal pain, there was excessive tympanites, watery diarrhœa, and elevation of temperature. Post-mortem examination showed tubercular ulceration of the intestine with a small point of perforation.

Dr. McPhedran presented a heart with

MITRAL STENOSIS.

(See *ante* p. 248.)

Dr. D. J. Gibb Wishart presented a heart with mitral stenosis and tricuspid incompetence from a girl of 14. There had been a history of tonsillitis and various rheumatic manifestations. The lungs were greatly fibrosed and absolutely devoid of any œdema. The mitral valve was of the cone form, the chordæ tendineæ being agglutinated and presenting an appearance like a half opened fan. The musculi papillares were also agglutinated by small fibrous patches.

Dr. Scadding presented a card specimen of

PERFORATING ULCER OF THE STOMACH.

Hospital Reports.

PAPILLOMA OF THE TONGUE SUCCESSFULLY REMOVED.

UNDER THE CARE OF T. S. COVERNTON, M.D., L.R.C.P., IN THE TORONTO HOSPITAL FOR SICK CHILDREN.

D.B., æt 2½, admitted March 30th, 1890. A growth existed on the dorsum of the tongue, one and a half inches from tip, and mesially situated. The tumor might be described as sessile; it had a very broad base, with, however, a distinct sulcus between its anterior and lateral edges and the dorsum of the tongue, the pos-

terior margin, however, was not so clearly defined. The growth was flattened and projected one-sixteenth of an inch above the general surface of the tongue; its surface was slightly irregular, presenting a number of minute papillæ to view. It measured three-quarters of an inch from side to side, and slightly more from before backwards. It felt spongy under pressure of the finger. The child had been sent to the hospital from the infants' home; the history of the development of the growth is somewhat obscure. It is said to have certainly developed since birth; but the exact date of its appearance is not known. It was first noticed four months ago; since that time the rate of growth has been very gradual.

On April 9th, a small piece was removed by means of scissors. Free oozing of blood followed, and the hemorrhage was checked by perchloride of iron locally applied. This portion removed was examined by Dr. Caven, pathologist to the hospital, who reported it to be papillomatous in character.

April 19th. Dr. Covernton, assisted by Dr. Dickson, proceeded to operate. Chloroform was administered. Two curved gilded needles were attached to the negative pole of a galvanic battery, the positive pole was applied over the lower cervical vertebræ, and with the strength of five milliamperes the needles introduced into different parts of the growth, leaving them inserted for a few minutes in each part; the whole mass was treated in this way, with the result that it was rendered perfectly soft and spongy, whereas on the first introduction of the needles it was comparatively firm and tough. After complete softening was thus produced, the softened mass was then very slowly removed by means of a gilded spear-shaped needle, which, under action of the current, was made to cut its way very gradually through the disorganized tissues. The growth was in this manner entirely extirpated, leaving a charred, somewhat depressed surface at the original site of the tumor. The whole operation lasted an hour and a-half.

April 26th. The tongue has healed nicely. There has been no undue swelling about the parts, in fact, no appreciable swelling at all. There is a slight irregularity in the surface of the tongue in the position of former tumor, otherwise the tongue presents a normal appearance.

TWO CASES OF PERICÆCAL INFLAMMATION*.

IN TORONTO GENERAL HOSPITAL UNDER THE CARE OF A. M'PHEDRAN, M.B., PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF TORONTO.

Case 1.—R. M., æt. 18, male, single. An operative in a shoe factory; thinks his illness was caused by jumping, alighting on a hard floor. Previous history good, never had any other illness.

On Tuesday evening, March 25th, 1890, the patient was seized with a sudden sharp pain in the right side of the abdomen, so acute that he was hardly able to walk. The following morning he was somewhat better, and returned to work, but the pain became so severe that he knocked off about noon. On Tuesday he again attempted work, but with a similar termination. On Thursday evening he took to bed, and summoned medical aid. At this time he was feverish, his temperature reaching 102° F. Heretofore his bowels had been regular, but they then became constipated, and remained so until Saturday, when they were moved by some powders, left by his physician. Other than the symptoms above mentioned he says he had none—no headache, no loss of appetite, none of the other symptoms so often present in typhoid fever.

Not improving he entered the hospital on Monday, March 31st. At this time he complained of pain in the right iliac fossa. There was a good deal of general abdominal distension; on palpation there was marked tenderness in the right iliac region, with a distinct hardness; on percussion, a dull note with a slight tympanitic resonance was elicited. This dullness extended inward to within an inch of the median line of the abdomen, and upward to from half to one inch above the iliac crest. The tympanitic note was, no doubt, due to the bowel lying in front of the inflammatory exudation; temperature, 102°; pulse, 100. The temperature gradually fell to normal, from which it varied but little thereafter. The pulse did not at any time during the attack exceed 100. His respirations, on the second day after admission, reached fifty-two per minute. After that they were little above the average. Poultices were applied until

* Reported by M. W. Barthart.

the evening of April 6th, when they were discontinued, the pain having to a large extent ceased; morphia had been used when necessary to relieve pain. On April 2nd there was some diarrhœa; on the 4th the catheter was used twice. Later in the day the urine passed naturally. Enemata were given every day or two till the 18th, when the bowels moved naturally. During the next three days he had diarrhœa.

When discharged from hospital, May 10th, the patient was much improved. Over the region where the pain and tenderness existed, there was still slight dullness and some considerable amount of thickening could be felt. No tenderness even on deep pressure. The patient's bowels were regular, tongue clean, appetite good, every prospect of a good uninterrupted recovery.

Case 2.—J. G., æt. 23, has always enjoyed good health, except that he has had the usual diseases of childhaod, and typhoid fever, from which he made a good recovery. Family history good.

On Tuesday evening, April 29th, the patient felt a slight pain in the abdomen, which gradually increased, and became very severe about 11 p.m.; in spite of some slight relief obtained by taking brandy, he put in a sleepless night. The next afternoon a physician was called in. The pain and tenderness were found to be limited to the right illiac fossa.

On Tuesday, May 1st, when he entered the hospital, the abdomen was tympanitic; tenderness not general, but limited to the right iliac region, where there was a distinct hardness, with dullness on purcussion; a tympanitic note was associated with the dullness; temperature, 103.2°; pulse, 138; respiration, 30. The bowels, which had been constipated, moved slightly on the day of his admission. Since then he has been troubled with diarrhœa and involuntary movements. The stools were pale and thin. The tongue was furred, with red and angry looking edges and tip. The appetite was poor, and there was some vomiting on the day of his admission. Over the whole body there was considerable jaundice, especially well marked in the sclerotic. He had incontinence of urihe, necessitating the use of the catheter several times. The urine, as it dribbled away, stained the skin and bed-linen a deep yellow.

On Saturday, May 3rd, the pain was easier; on percussion there was a distinct amphoric note over the hardness in the iliac region. On Sunday morning, May 4th, he had a chill, and at noon his temperature reached 103.3°. There was still dullness on percussion over the same area as before. As his general condition seemed worse an operation was decided on. The patient was anaesthetized, the abdomen washed off with hyd. bichlor. (1 in 2,000), and an incision made, about six inches in length, the centre of which was on a level with the ant. sup. iliac spine, extending obliquely downward and inward. The skin and fascia were divided, the fibres of the abdominal muscles separated, the hand passed backward behind the peritoneum, when with the aid of a hypodermic syringe, a pocket of pus was revealed; this was opened and about two ounces of pus of a distinctly fæcal odor removed therefrom. A drainage tube was put in, and the wound dressed antiseptically, the dressing being changed as often as it was found necessary. The discharge retained the fæcal odor till Tuesday, when it gradually disappeared.

The patient died on May 12th, 1890. No autopsy was allowed; enteritis was the probable cause of death.

Clinical Notes.

SARCOMA OF KIDNEY—DEATH—AUTOPSY.

BY J. H. M'CASEY, M.D., C.M., CONCORDIA, KANSAS.

A son of Mr. P., æt. 3½ years, about nine or ten weeks ago, showed signs of failing health, weakness, loss of appetite, anæmia, fretfulness, etc. Slight fulness appeared just above the left lumbar region, posteriorly, which soon showed in front, about the region of the spleen and stomach. Bowels were regular; appetite gradually declined. No fever; no hæmaturia. About two weeks before death occurred, examination showed lungs and liver normal; emaciation; enlargement of abdominal veins. Large tumor over the region of the spleen and stomach, with slight bulging over the upper part of the left lumbar region, posteriorly. The tumor was smooth and dull on percussion. Aspiration yielded negative results, supporting and palliative

treatment was continued until February 9th, when death closed the scene.

The autopsy revealed sarcoma of the kidney weighing four pounds. The tumor was adherent to the adjacent structures, as the spleen, liver, stomach, and intestines.

REMARKS.

Primary malignant disease of the kidney is rare. It is usually unilateral, and is found more frequently during the first decade of life. It occurs with greater frequency before the fifth year. Gross says: "It may be confidently asserted that carcinoma is never witnessed in early life, and at least two-thirds of all examples recorded as cancer should be classed as sarcomas."

We accept the doctrine that cancer is cells which have gone astray, and developed under new conditions. Some authorities maintain that cancer begins in the cortex, and afterwards spreads to the pyramids. Wilks and Moxon are of the opinion that the lymphatic glands outside the kidney are primarily attacked, then the hilus. The latter is probably the correct view. The erroneous idea that malignant tumor formation is a disease of advanced life only, leads a great many physicians to exclude it from the category of infantile diseases. There is a rapid growth of some part of the abdomen, as shown by tape measurement, notwithstanding shrinkage and progressive emaciation in other parts of the body. The primary site of bulging is, therefore, of great importance, as tumor of the kidney will displace other organs upwards towards the thoracic viscera. This was demonstrated in the case just cited. The tumor during life was not located particularly in the renal region, but attained its greatest prominence over region of spleen and stomach. The heart becomes embarrassed; the lung compressed, so that dyspnœa is a prominent symptom during the latter stages of the illness. Usually only one kidney is affected. The right has the preference. Hæmaturia is not found so constantly in malignant renal growths as has been generally supposed. It occurs in about forty to fifty per cent. of all cases, and when found with co-existing tumor of kidney is confirmatory. When the tumor is large, and presses on the internal abdominal vessels, there will be enlargement of the superficial abdominal veins, and anasarca and ascites are not infrequent. The tumor does not follow the movements of the diaphragm. Fever is rarely present, cachexia is common. Pain may be present constantly, or only occasionally.

Personal.

DR. CHAS. O'REILLY, of the Toronto General Hospital, sailed from New York for England, June 4th.

DR. OLDRIGHT, of Toronto, has gone to the sea coast to recuperate. At last accounts he was at Atlantic City, N.J.

DRS. CAMERON AND NEVITT left Toronto for England June 10th. They will spend some months in London and on the Continent.

DR. E. B. O'REILLY is now acting as Medical Superintendent of the Toronto General Hospital during the absence of his brother in Europe.

WE omitted, by a mistake, in our last issue to give the complete list of the Toronto Hospital assistants, recently appointed. There were six —three from Trinity: Drs. R. M. Hillary, R. Hill, and E. McCarthy; three from Toronto: Drs. C. F. McGillivary, L. F. Barker, and T. S. Cullen.

DR. GEO. A. PETERS, one of the Demonstrators of Anatomy in the Medical Faculty of the University of Toronto, went to England in May, and a few days after his arrival passed the primary examination for the Fellowship of the Royal College of Surgeons of England. We believe this case is quite without precedent, as we know of no colonist, or anyone else outside of Great Britain, who has gone to England and passed this examination without some special preparation in the United Kingdom. We have much pleasure in congratulating Dr. Peters on his brilliant success. It shows not only what a Canadian can do, but also what a Canadian Medical College can accomplish. There is at present no F.R.C.S., Eng., in Ontario, so far as we know.

Births, Marriages, and Deaths.

MARRIAGES.

KNUDSEN—BARRETT—At the Church of the Ascension, by the Rev. Mr. Baldwin, on the 4th inst., William O. Knudsen, of Alabama, and Florence D., daughter of the late Dr. Barrett.

STARK—ROBINSON—On Saturday, at St. Andrew's church, Rochester, N. Y., by the Rev. Charles G. Snepp, Assistant Rector, William Geddes Stark, M.D., of Hamilton, Ontario, Canada, to Cornelia Louise, daughter of the late Jonathan Robinson.

ELLIOT–ADAMS.—On the 12th inst., at the Church of St. George the Martyr, by the Rev. Prof. Clarke, of Trinity College, Dr. Sydney Barrington Elliot, of Louisville, Kentucky, son of Dr. C. S. Elliot, of Toronto, to Flora McDonnell, daughter of Dr. J. Adams, of Toronto.

MITCHELL—KING—On Wednesday, June 4th, at the residence of the bride's father, by the Rev. Thos. Nixon, Smith's Falls, assisted by the Rev. S. King, grandfather of the bride, Rev. A. E. Mitchell, B. A., of Waterloo, to Miss Alice E. King, only daughter of Dr. John S. King, 236 Sherbourne St.

CLARK–GORDON.—At the residence of the bride's brother, Dr. David Gordon, 646 Spadina avenue, on Monday, June 9th, by Rev. D. Gordon, father of the bride, assisted by Rev. C. W. Gordon, brother of the bride, J. Murray Clark, Esq., of McPherson, Clark & Jarvis, to Greta H., only daughter of Rev. D. Gordon, late of Harrington.

RACEY—CHANDLER—On Wednesday, June 4th, at the Mission chapel, St. John, N. B., by the Rev. Father Davenport, W. R. Racey, manager Merchants' Bank, Woodstock, N. B., and son of the late Henry Racey, of Brantford, Ont., to P. Helen Chandler, daughter of Dr. A. H. Chandler, of Moncton, and granddaughter of the late Governor of New Brunswick.

Obituary.

CARMAN M. GOULD, M.D.—Dr. C. M. Gould, of Colborne, died, after a lingering illness at his home, June 4th, at the age of sixty-three. He was well-known and highly respected in the Township of Cramahe, where he was born, and spent practically the whole of his life. He graduated in medicine in 1853, and was thereafter always a practising physician, although the condition of his health for the last few years interfered with his labors.

Miscellaneous.

NOVA SCOTIA MEDICAL SOCIETY.—The twenty-second annual meeting of the Nova Scotia Medical Society, will be held at Granville Ferry, Annapolis County, on Wednesday and Thursday, July 2nd and 3rd. Dr. Willis B. Moore, Kentville, N.S., is the president, and Dr. W. S. Muir, Truro, is the secretary.

LEGACIES TO THE HOSPITALS OF PHILADELPHIA.—By the generous will of the late George S. Pepper, nearly every charitable institution in Philadelphia is enriched. The following are the more important legacies :

To the University of Pennsylvania, $60,000, for the endowment of a professorship, to be selected by William Pepper, M.D.

To the Hospital of the University of Pennsylvania, $50,000.

To the Presbyterian Hospital, $50,500.

To the Hospital of the Protestant Episcopal Church, $50,000.

To the Orthopædic Hospital, $25,000.

To the Pennsylvania Hospital, $50,000.

To the Hospital of the Jefferson Medical University, $50,000.

To the Charity Hospital, $25,000.

To the St. Joseph's Hospital, $25,000.

To the Children's Hospital, $25,000.

To the Wills Hospital, $10,000.

To the St. Christopher's Hospital for Children, $25,000.

To the Hospital and Dispensary of St. Clement's Church, $10,000.

To the Children's Hospital, Country Branch, $10,000.

To the Maternity Hospital, $25,000.

To the Northern Dispensary, Southern Dispensary, Philadelphia Dispensary, Howard Dispensary, each $5,000.—*Medical News.*

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE"

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, JULY 1, 1890.

Original Communications.

PRESIDENTIAL ADDRESS, ONTARIO MEDICAL ASSOCIATION.

BY J. ALGERNON TEMPLE, M.D., M.R.C.S.

Gentlemen, I owe you my best thanks, not only for the honor you conferred upon me in electing me your President, but also for the pleasure you have enabled me to feel as I rise to welcome you to our tenth annual meeting. And however great and sincere a pleasure it may be to welcome my friends from Ontario, they will pardon me if I experience an even keener satisfaction in offering, in their name and my own, our warmest greeting to our guests from the United States and from the sister Provinces. We owe them a deep debt of gratitude for coming to take part in our deliberations and discussions. We cannot but highly appreciate the honor they bestow on our association by their membership during their stay. To all of you, gentlemen, I will express a hope that at the expiration of my term of office I shall in no way have forfeited your confidence, and that the interests of the association will not have suffered under my care.

We have to lament that several of our number have been removed by the hand of death since we last met. To two of them I will briefly allude as being very worthy and distinguished members of the association—Dr. Mackay, of Woodstock, and Dr. Yeomans, of Mount Forest. Both had occupied the position of Vice-President, and took an active interest in all that tended to the welfare of the association. In the neighborhoods where they lived they enjoyed the confidence of their patients, and were generally respected for their talents and honorable career. They were foremost in all undertakings that aimed at our well-being as a body, and you will remember with what attention and pleasure we used to listen to them here. Our deep sorrow for their early death can be lightened only by the thought that they have left an honorable record behind them to keep their memory green, and to be an inheritance for the profession they loved and served so well.

A resolution was passed last year to memorialize the Hon. Minister of Finance that all surgical instruments should be admitted free of duty. Acting on that resolution, I wrote to the Minister at Ottawa, setting forth in as strong language as possible the desirability of having the duty abolished. I regret that we did not meet with success, as you have already learned from the reply to our communication which has been read by the Secretary.

Another point, raised by the Committee on Registration, was in reference to the registration in Canada of English registered practitioners. I have made very full enquiries of Dr. Pyne, the Registrar of the C. P. S., Ontario, and I find that the college has been in constant correspondence on the subject with the English authorities. The C. P. S. is quite willing to register English graduates in this country, provided that a similar privilege of registration in England is

accorded to graduates of the C. P. S. of Ontario, and it is a matter for regret that an agreement of this kind has, so far, not been arrived at. The English authorities, while fully recognizing the high standing of our examinations, are not willing to place our graduates on the English Register. They offer us a Colonial Register, which, in my opinion, the C. P. S., Ontario, was justified in refusing; for we should, by accepting it, have the appearance of placing our men on a plane of inferiority. While we cannot well agree to reciprocity on other than an equal footing, we may yet hope that a way out of the present difficulty will be found. When we consider that for one Canadian who desires to register and practice in England, there are probably five or more Englishmen who come to practice in Canada, it is evident that the English graduate has more to gain from a satisfactory settlement of the question than has his Canadian fellow.

With reference to the examinations as conducted by the Ontario Council, I may venture to speak without presumption. After fifteen years' experience in medical teaching, I do not hesitate to say that there is no country, not even England, in which a higher standard is required of the medical student than in ours. The diploma of the C. P. S., Ontario, is a guarantee that its holder is fit to practice in any part of the world. Indeed, our system of examination and graduation might well be taken as a pattern both in England and the United States.

I trust, gentlemen, that we shall not close our present session without appointing a committee to memorialize the authorities to have the law so amended, if possible, that in all suits for malpractice, security for costs shall be given before commencement of action. It is scandalous that we should be obliged to pay not only our own costs in defence, but also in a majority of cases the costs of the other side. To render keener the injustice under which we suffer, it is notorious that in many instances where these actions are brought, the services of the physician have been given gratuitously, because the patient was too poor to pay for them.

I would also suggest that some action be taken towards securing a uniform license for the Dominion. It borders on the ridiculous that a man who has graduated before the Council here, and wishes to settle in Manitoba, should be obliged to pass before the Manitoba Council as well. If each Province were represented on the Board of Examiners it could be easy to set this right, to spare the young student a hardship and his pocket an expense that he may be in no position to bear after the final outlay on his medical course. In thus pleading the cause of the student, I feel confident of your sympathy and support.

There is one more subject I would wish to bring to your notice, in the hope that some united action may be taken to rectify what I believe to be a positive injury to our profession: I mean the practice of attending lodges and clubs for an annual fee of so much per head. I regret to say that this custom is becoming more widespread every day in our midst. I do not speak from motives of jealousy or personal interests, because I myself have none of it to do, but because I have always condemned the practice as one lowering the standard of our profession. I sincerely believe that the man who indulges in this practice does himself a great injustice, by giving his services for a fee far beneath their value. He injures his fellow practitioner by depriving him of the legitimate means of making his living, and he lowers his profession in the eyes of the public by allowing them to buy his services at their own price. Surely if the laboring man by united action can raise the price and value of his labor, and declines to work unless he gets what he believes he is worth to his employer, we as a profession ought to be able to sustain a uniform standard of fees. It is a subject I would earnestly commend to your most careful consideration, and see if some means cannot be devised to rectify the present evil.

I will now ask your permission to review, in a few words, the career of the Ontario Medical Association. It was founded in 1851, with 132 members, under the distinguished presidency of our venerable and esteemed fellow-practitioner, Dr. Workman, and nothing short of success could be predicted for an association to which so learned a gentleman lent his aid and ability. Further, it is not to be wondered at that the association has steadily grown and prospered under the management of such worthy men as Drs. Covernton, of Toronto, Macdonald, of Hamilton, Clark, of Toronto, Worth-

ington, of Clinton, Tye, of Chatham, Richardson, of Toronto, Rosebrugh, of Hamilton, and last, though not least, Henderson, of Kingston. I assure you, gentlemen, my nerve and heart failed me when I found that I was to follow such distinguished men; and I felt, after my election, that I was rash indeed in undertaking the responsibility which it was at once a duty and an honor to accept.

At our last meeting there were 219 members present out of a total of 568. This was a proof that the objects of the association commended themselves to the profession, and we may hope, as time goes on, to have on our roll the names of every registered practitioner of good standing in Ontario.

You will see by article 11 of our by-laws that the promoters of the association had six objects in view. Let us consider them briefly, and judge how far the founders' wishes have been realized.

Firstly, as to "The cultivation of the science of Medicine and Surgery." During his student days a young man finds his time fully occupied in preparing himself for his examinations. After graduating, he may decide to practice in a city where he has the advantages of libraries, public meetings, and debates, where he is brought into contact with his fellow-practitioners, to keep pace with whom he is obliged to read and study. But another, less fortunate, settles in some remote district, where perhaps opportunities rarely, if ever, present themselves of exchanging thoughts with his fellows. Possibly he may have carried off the highest prizes at examination. His ability may be rare, and had the opportunity been afforded him, he might have become a factor in the growth of medical knowledge. The force of circumstances alone renders his energy sterile, and the promises of his future unfulfilled. We have to-day, gentlemen, some really brilliant men in Ontario who are not our members. We ask them to join us. Their attendance at our meetings will give them the opportunity of contributing their own ideas and of discussing those of others. They will be stimulated to the study that is necessary if we would keep up with the strides of knowledge, for the science of medicine and surgery can only be successfully pursued by constant and persistent daily application, and the man who neglects this will live to find that he is left behind in the race. If we seek for proof that our yearly gathering has accomplished much for the progress of our science, we need but listen to the members who, while their College days are in the more or less distant past, discuss for our benefit the most recent discoveries and theories of medicine with that consciousness of mastery that can only come from observation, from reading, and from thought. The longer we are in practice the more clearly we realize that the class-room does not end our education. When we leave it we are but on the threshold of our practical life, of that life that must make the most careless man perceive, when he enters upon it, that it is more incumbent on him than on men in most other walks in life, to gather in the knowledge of past centuries, and more especially that of his own time.

As a natural sequence to these remarks, I may follow the good example of my predecessor in commending to your notice and appreciation the efforts of the gentlemen connected with the Ontario Medical Library Association. Although the undertaking is still in its infancy, it is already a credit to its promoters, and we should all contribute to its success by the gift of books and by becoming members. It is no small privilege to be able to borrow for purposes of reference the books that we may well hesitate to buy, from motives of price, or because of their only occasional utility. By working together in this matter, we might acquire a library, in time, equal to that of the Legal Society.

The second aim of our association is "The advancement of the character and honor of the Medical Profession." It is an honorable thing in itself, gentlemen, to belong to our profession. For my part, I cannot conceive a greater pleasure than that of saving a valuable life by a skilful stroke of the knife, or by the judicious administration of a properly selected drug. I can imagine no higher reward than the gratitude of husband and children, for whom you have snatched from death, by prompt and decisive action, the mother and the wife. The existence of our association is an added bond of union between us, and must tend to foster the *esprit de corps* that will, if anything can, keep the profession free from quackery. If I

only refer indirectly to the wolves in sheep's clothing who disgrace us, it is because I might be tempted to use unparliamentary language, and because I know that, in this at least, we think alike.

In speaking of our responsibilities, I might remind you that no men are more generally the recipients, willingly or unwillingly, of family secrets than ourselves. I might expatiate on the sacredness of this and other trusts that weigh upon us, but again, gentlemen, I am pleased to feel that you must realise them as I hope I have striven to do. The character and honor of the profession is in our own hands, individually as well as collectively, and just in proportion as we strive to raise it in public estimation will be the measure of our success. Since, then, we are alone its custodians, we cannot afford to debase or let others debase the character of our honorable calling, by trading upon its name; a name that, in the light of the recent achievements of surgery, never stood higher in the world than now; a name that we confidently expect to shine still more brightly in the achievements of the near future.

To those who have watched the progress of medical education in Ontario during the past two decades I need hardly enlarge on our advance along the lines laid down in the third of the headings under our consideration: "The elevation of the standard of medical education." The candidate for matriculation twenty years ago was expected to be able to read and write, and that none too correctly. The need of improvement in this respect soon made itself manifest to those engaged in matriculation, and the present examination is a fair test of a man's preliminary education. I do not say that it is perfect, but we are rapidly advancing in the right direction, and I hope to live to see the day when medical and law students will be obliged to take a University degree before entering on their purely professional studies. There can be no question of the after benefit of a thorough education, and one reason, in my opinion, why more of our men do not contribute to the medical press, is that they feel weak in their ground work. While the improvement in the standard of preliminary education has been decided, although not all we could wish. the progress in purely medical training has been so rapid that the student of the present time finds himself in an enviable position, when compared with that of his less fortunate brother of a few years ago. The attention given to clinical instruction is a credit to Ontario institutions. The teachers are apt, competent, and eager to impart knowledge. The wards of our hospitals afford abundant material for the learner, who has only himself to blame if he does not make use of it.

In addition to our present clinical advantages we shall shortly have another hospital, thanks to the munificent gift of the late Senator Macdonald. I hope his generous act will prove an incentive to others. There is room for some of our wealthy citizens to follow the example set them in Montreal, by joining together to endow a hospital that shall be a credit to our city, and materially increase the facilities of acquiring a medical knowledge. There is no doubt, gentlemen, that our meetings have done much to stimulate the advances that I have referred to as being desirable, or as already in part accomplished, and the larger the society grows the more widely will its influence be felt.

To proceed to the fourth object of the society, "The promotion of public health." The growth of this branch of our science has done and is doing a vast amount of good in the Province, while, from another point of view, it has undoubtedly aroused public interest in our behalf, and added to the dignity of the profession. It teaches the young physician that his first duty is not the curing of disease, but rather its prevention. It may seem paradoxical that we should use our best efforts to minimise the existence of the very thing, the treatment of which we have chosen to supply our means of livelihood. Well, gentlemen, we can, at least, in the pride of self-satisfaction, meditate on the example of our legal friends who, when we have the misfortune to consult them, far from pouring oil on the troubled waters of litigations, are not averse to advising us to go on with our case.

Joking apart, this prevention of disease is but one example of the many noble, self-denying acts of the honourable physician. We find more gratification in warning the public of their danger beforehand, than in treating them for some dread disease.

Through the length and breadth of the Province we have established our health offices

under the charge of competent physicians, who give their energy, and the time they can often ill spare, for the benefit of their fellow men for a reward far below its value.

The fifth desire of our founders was for "The furtherance of unity and harmony among the members of the association."

As to our success in this aim there cannot be two opinions. Our annual coming together has been invaluable in promoting good-will among us. The social element of these gatherings affords opportunities for friendly chats and explanations, that might not otherwise occur. We may possibly come to a meeting with a feeling of bitterness against a brother doctor, arising from a report that he had said this or that about us. It only needs a few words of explanation to persuade us that our supposed enemy is not an enemy after all; that the story that troubled us was a pure fabrication, or at most a misconstruction of what was really said. We are unfortunately aware that differences between medical men do exist, particularly in small places. Such things should not be. It is our duty surely to cultivate a kindly feeling of brotherhood with one another. It is incumbent on us never to do or say anything behind the back of a fellow practitioner that we would not do or say before his face, and the man who tries to build up his own reputation at the expense of another will succeed in injuring himself only in the end. Differences of opinion must occur. But because I differ from you it does not necessarily follow that I am right and you are wrong. We ought to be able to arrange such matters privately between ourselves. Above all things, the sacredness of the consultation room should be held inviolate; and when we find that a fellow practitioner has committed an error of judgment, it is our bounden duty to use our most strenuous efforts to rectify it and to shield him from harm.

We now pass to the sixth and last object of the promoters of this association: "The forming of a connecting link between the various city and county societies and the Canada Medical Association." Under this clause the secretary will submit for your consideration the applications of various bodies for affiliation, which I trust will receive your sanction. In addition to the direct benefits, to them and to us, arising from their affiliation, it will also tend to bind together the members of the several societies who for various reasons cannot be with us here.

After this hasty and too brief review, I may say without fear of contradiction that the intentions of the promoters of the association have been adequately realized; more fully realized, perhaps, than they could have reasonably hoped.

I wish to express my thanks to those members of the various committees who have kindly aided me in the discharge of my duties; and I particularly wish to thank our very efficient secretary for his uniformly kind attention, and prompt and efficient discharge of his duties. In him, gentlemen, the association possesses a most valuable officer.

The President concluded his remarks by referring to the subject of the prevention of puerperal fever. This will appear in the next issue of THE CANADIAN PRACTITIONER.

ANIDROSIS AND BROMIDROSIS; PELIOSIS RHEUMATICA; ECZEMA OF HANDS, OF FACE.

Abstract of a Clinical Lecture delivered at the Toronto General Hospital.

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Case 1.—A boy, aged eight years, was brought some days ago, on account of a dry, somewhat harsh, scaly condition of skin of all parts except the feet. His mother said he had shown no signs of perspiration since infancy with the exception of the feet, from which there has been a profuse, badly-swelling sweat for two or three years. The child, though not robust, is not unhealthy looking; he is rather anæmic. Appetite and digestion fair. To the deficiency or absence of perspiration, the term anidrosis is applied, and bromidrosis to the condition of the feet.

Anidrosis is rarely primary, but is symptomatic in many diseases, as in diabetes, Bright's disease, fevers, and in the affected parts in many skin affections.

Bromidrosis affects most usually the feet only, but may affect also the axillæ and perineum; it may also be general. The sweat may be offensive as secreted, or only become so from alteration after secretion. The existence of these two

conditions in the one person is, so far as I know, unusual.

For the anidrosis we gave, you remember, pilocarpine mur., gr. $\frac{1}{16}$, to be taken at bedtime, to be increased until sweating was produced. It required gr. $\frac{1}{4}$ to cause a slight perspiration, and this dose has been continued nightly for some days. The skin is much healthier looking and softer. Syr. fer. iod. m. 20, syr. fer. phosphi. co. in 40, after each meal.

For the offensive sweating of the feet, the mother was directed to bathe them with hot water, dry thoroughtly, and then dust freely with finely pulverized boracic acid. She was also to place in the clefts of the toes pledgets of boracic salicylic cotton, and the inside of the stockings were to be dusted freely with boracic acid. The case not being a severe one, we hoped this would be sufficient, and we have not been disappointed, as the offensive odor has quite disappeared, and the feet remain dry. Had this failed, other means could have been adopted. The insides of the boots could be dredged with the boracic acid, and cork soles put into the boots, the soles to be washed daily in solution of the same acid. Internally precipitated sulphur, ℥ i, morning and evening, is highly recommended. Hebra's plan, which he said never failed, was: After washing, to apply ung. plumb. vasilini., made of equal parts of lead plaster and vaseline, and adding about ½ per cent. salicylic acid. The unguent is applied by spreading on lint or old soft linen; this is torn in strips, and wrapped round the foot, pledgets being placed between the toes; the dressing to be renewed twice a day (Diseases of the Skin; Radcliffe Crocker). The effect must be watched lest too much irritation result.

Case 2.—This man æt. 60, suffered from a rather rare affection—peliosis rheumatica. He says he first had pain in the left knee, which swelled somewhat, and is so still. He was feverish. A day or two afterwards an extensive hemorrhagic eruption occurred, being uniformly diffused from the lower third of the thigh to the toes. You see that its hemorrhagic, from its color not disappearing on pressure and from the greenish-yellow staining of the skin of the thigh above the seat of eruption, the same kind of staining as occurs in bruises. On the outer leg, the body and arms are numerous small hemorrhagic spots, none of them are raised above the level of the skin, nor are their margins well defined. Their color becomes a dark brown. It lasts usually four or five weeks and then gradually fades. Careful examination with a lens shows the vessels in the margins of these spots thrombosed. Such eruptions as this occasionally occur in acute rheumatism; and on the other hand, disease of the valves of the heart may occur in just such cases as this in which the symptoms of rheumatism are very slight. The disease is classified in erythema muliforme or exudativum. The simple erythematous rash was possibly prevented by the hemorrhage. The hemorrhage is due, some say, to changes in the vessel walls; others, to changes in the blood itself. Both may be at fault. The treatment is simple. It is important to keep the patient in bed lest relapses occur. He should be fed liberally, his general health attended to as may be required in each case. As in all cases of rheumatism in the debilitated, iron is probably the best remedy.

Case 3.—The next patient is a man aged 55, is suffering you see from a dry scaly eczema of both hands He has had it for some weeks, he says, and the thickening of the skin from infiltration proves the truth of his statement. He has been employed in soap-making many years, and handles the caustic alkalies, grease, etc., so that doubtless the eczema is due to the irritants he handles. He is not inclined to agree with that opinion, as he has only lately had eczema, though employed as at present for many years. His former immunity was probably due to his better health and strength; at present he is rather ill-nourished.

The first step in the treatment should be the removal of the cause, *i.e.*, have him give up his work. He cannot do this, he said. Then he must protect his hands with rubber gloves. If these cause too much maceration of the skin by retaining the sweat, a kid glove may be substituted. As a local application I have had most satisfaction from salicylic acid and the most elegant way of applying it is in a glycerine jelly as recommended by Unna of Hamburg.

℞.	Gelatine	15 parts.
	Zinci oxid.	10 "
	Glycerine	30 "
	Aquæ	40 "

To be carefully combined and two parts of acid salicylici added. If dispensed in a tin, it can be easily melted when required, by standing it in hot water. It is painted on with a small brush and covered with a very thin film of absorbent cotton. The acid tends to cause the gelatine to crack, but I have found it to work well. It is easily removed daily by heating in hot water which has also a good effect on the inflammation. Taylor, of New York, recommends balsam of peru 3j., diachylon ointment, and oxide of zinc ointment, each 3j., to be applied to the hands. If the glycerine jelly were found to be cumbersome, a paste consisting of lanoline, vaseline, zinc oxide and powered starch, each 3j., to which is added 5 grs. acid salicylic or 10 to 30 grs. resorcin, may be applied. The hands should be cleansed without soap, and when water is used it had better be hot.

His general health needs attention, as without improvement in it a cure will not be permanent.

Case 4.—A washerwoman with general chronic eczema of the face. The skin is very rough; there are several slight fissures from which there is a little oozing of the characteristic sticky serum. The steam, her face is exposed to, over the washtub, is doubtless the chief exciting cause. It will be best for her to give up work, and come into the hospital for a short time. The glycerine jelly will make an excellent mask for the face. With its use a very bad case we had in the hospital a short time ago made a most satisfactory recovery.

Selections.

SALICYLATE OF SODA BY INJECTION.—Stein relates the history of a woman who had been suffering for some weeks from a severe attack of articular rheumatism, and whose digestive powers were so feeble that he decided to prescribe salicylate of soda in the form of rectal injections, giving two or three grammes of salicylate of soda in 200 grammes of starch solution, and repeated three times a day. The result was excellent; the patient retained fifteen injections, and failed to retain only three (one after half an hour and two after an hour).—*Ther. Mntsh., Feb., 1890—Journal de Medicine de Paris, May 11, 1890.* G.A.F.

TRICHLORACETIC ACID.—Trichloracetic acid is one of the best and most reliable caustics for warts, corns and indurated chilblains; and these can be readily separated from the non-affected tissues three or four days after the application. The formula is $CCL_3\ CO_2H$. The crystals are rhombohedral in form, deliquescent, easily soluble in water. Melting point, 52.3; boiling point, 195; density at 46°, 1.617.—*Berichte von E. Merck, Journal de Medicine de Paris.* G.A.F.

Dr. B. W. Richardson, of London, England (*The Asclepiad*, 1890), states that when a patient is lying in collapse from chloroform or other cause, let no one attempt to resuscitate by means of the direct action of the galvanic current, either through the respiratory or the cardiac organs. If by the current we call forth active movements, either of the respiratory muscles or the heart, it is like a whip to a jaded horse at best, and merely exhausts more speedily a failing centre of force which it does nothing to re-supply, and, as we now see, with a possible antagonism of action between the effect produced on the diaphragm and the heart. The whole value of treatment in cases of the kind named, rests exclusively on the teachings of experiment, and if experiment with the galvanic current is opposed to the method specified, the practitioner who knowingly employs that method in a desperate extremity, is not only acting perversely, but wrongly and foolishly. Better do nothing till knowledge shows the right, than do the wrong thing for the sake of doing something.

A NEW METHOD OF IRRIGATING THE NOSE. By Dr. Pins, of Vienna.—I have been struck, says the author, by the fact that among all the methods employed for nasal irrigation there is not a single one absolutely free from objection. Most frequently the danger consists in the fluid finding its way into neighboring cavities (sinus, Eustachian tubes, etc.), which entails the temporary suspension of the treatment, and at times causes an extension of the lesions. I have sought therefore for some better mode of procedure. I use a bottle of moderate size, into which dip two glass tubes. The first reaches

the bottom of the vessel, the second terminates a little above the surface of the contained liquid. To the first is attached a rubber tube, terminating in a mouth-piece, which the patient holds firmly between his lips. To the second is attached another rubber tube, terminating in an olive-shaped extremity, which is introduced into one of the nasal fossæ. The patient then makes a forced expiration, which on the one hand brings about a complete closure of the posterior nasal fossæ, and on the other forces into the nasal cavity the liquid contained in the vessel. The fluid makes its exit by the other nasal opening. The stronger the expiration force the more complete is the occlusion of the posterior fossæ; the pressure of the fluid can thus do no harm. I have tried this method in thirty cases, and have been very well satisfied with it. The only contra-indications depend on the presence of serious disease of the heart vessels, or of the lungs.—*Le Mercredi Medical, April, 1890—Lyon Medical, May, 1890.*

G.A.F.

A NEW APPARATUS FOR INFANT-FEEDING, BASED ON THE INFANT'S WEIGHT INSTEAD OF ITS AGE (by Dr. August Seibert).—The apparatus, he said, was intended for sterilizing the milk or fluid food of artificially fed children, and while the principle was not new, this particular apparatus possessed certain advantages over others which made it specially desirable. The other apparatuses with which he compared his were those of Escherich and Soxhlet. The chief objection to these was that the size of the bottles was based on the age of the infant instead of on its weight. The bottles were too large, and led to the administering of more food than the stomach was capable of digesting. Dr. Seibert had constructed bottles of six different sizes, to contain three, four, five, six, seven, and eight ounces respectively, the first for infants weighing, irrespective of age, six to eight pounds, the second for infants weighing from nine to ten pounds, the third for those weighing from eleven to fourteen pounds, the fourth for those weighing fifteen to sixteen pound, the fifth for a weight of seventeen to eighteen pounds, and the sixth for a weight of nineteen to twenty pounds. Eimer & Amend were the manufacturers, and sold a set for one dollar, with a castor-like apparatus to stand them in, the whole being placed in a covered vessel with a little water at its bottom, which boiled thirty to forty-five minutes, and sterilized the milk by the steam surrounding the bottles. As the child increased in weight the set could be exchanged for a size larger, by paying an additional twenty-five cents. The stopper consisted of rubber, with a notch cut in the side at the lower end, through which the steam could escape during sterilization, and could be pushed down at the close of the sterilizing process, so that the bottle became air-tight. The neck of the bottle shaded into the body, and the bottom was oval, making it easy to clean. The card of directions for the nurse also stated the number of hours to intervene between the feedings—two hours for the smallest, three for the largest named. The point upon which the author laid particular stress, and which he desired to have discussed, was the propriety of regulating the quantity of the child's food by its weight instead of by its age.—*Archives of Pediatrics.*

INTUSSUSCEPTION SUCCESSFULLY TREATED BY INJECTION OF AIR.—On May 9th I was asked to see a child aged 10 months. The mother stated that, about seven hours before I saw it, the child woke up suddenly from sleep and commenced screaming. Sickness occurred very shortly afterwards, and within three or four hours blood and mucus were passed from the anus. When I saw the child it appeared very restless, tossing about in its mother's arms and then apparently dozing off for a few minutes. It was unable to retain any food; pulse small and very rapid; blood and mucus without any fæcal matter, were passed from the anus during my examination. On examining the abdomen, I noticed a mass in the left hypochondriac region, which appeared to be connected with the intestine, and which the mother said she was sure had not been there early in the day. Feeling confident that it was a case of intussusception, I procured a long rubber tube. I may mention that, being without tubing, I had to do the best I could with tubing used for keeping draughts from penetrating windows and doors. Under chloroform, with the help of the mother I passed two to three feet of the tubing, and by means of a Higginson's syringe I pumped into

the intestines as much warm water as they would retain. I then manipulated the mass through the abdominal wall; this, of course, expelled the water. This process was repeated several times, but without much success. I then proceeded to pump in air with the same apparatus, blowing the abdomen as full as possible, and then manipulating as before. Under this treatment I was rewarded with feeling the mass gradually decrease, and finally, after an hour and a half, I distinctly felt the gut slip into its right position. Within five minutes about an ounce of loose fæcal matter was passed. The child was practically well within a few hours without further treatment. I was interested to learn that the parents had lost a child a few years ago with exactly the same symptoms. The child died on the fourth day. No examination of the abdomen was made, and the cause of death was certified to be "inflammation of the bowels."—*Edward P. Furber, in British Medical Journal.*

THE HOT-AIR TREATMENT OF PHTHISIS.—Probably no disease has had more remedies suggested for its cure than phthisis. Very few of the new methods introduced, however, have proved of any use, and have one by one been discarded. One of the latest, suggested by Halter and Weigert, seems likely to follow the fate of its predecessors, if, indeed, it has ever been seriously considered. Halter maintains that the tubercle bacillus will not live in a temperature of more than 41° C.; and therefore suggests that if patients can inhale air at a temperature above 41° the bacilli will be killed, or at any rate be rendered harmless, and thus the course of the disease stayed. Mossi and Rendelli have already shown that in dogs, when the inspired air is at so high a temperature as 150° to 160° C., the temperature in the large bronchi is only 39·3°. In the *Deutsche Medicinische Wochenschrift* for April 10th, Dr. Ernest Sehrwald of Jena publishes some interesting experiments that he has made on dogs with regard to "lung temperature." Thermometers were introduced between the costal and parietal layers of the pleura on each side. By means of an ingenious apparatus the air could be introduced through the nose or directly into the trachea, and the temperature of the inspired and expired air carefully ascertained. After an elaborate series of experiments, Dr. Sehrwald came to the following conclusions: 1. Dry air can be inhaled through the nose, while the temperature of the air is gradually raised from 50° to 350° C.; the temperature in the pleura at the same time only rises 1° C., even although the experiment be prolonged for one hour and a half. 2. An equal rise can be obtained by rapid and forced respiration. 3. The mucous lining of the trachea is much more sensitive to hot dry air than is that of the mouth and nose, for in the former the temperature of the air cannot be raised above 80° C. 4. When hot dry air is inspired, the frequency of the respiration rises from 80 to 144 in the minute. 5. The temperature in the lungs rises at the same time, but only 1°. 6. Halter's view that the tubercle bacilli are killed by a temperature of 41° is not proved to be correct. Even if it were, the mass of bacilli embedded in the lung tissue would only be affected by heating the tissue itself, and by his (Sehrwald's) experiments it has been shown that a sufficient rise of temperature within the lungs cannot be obtained by the inspiration of hot dry air, and that therefore this treatment is useless in phthisis.—*London Lancet.*

THE TREATMENT OF TUBERCULAR ABSCESSES.—Billroth has again made a great impression on the surgical world by an article published a few days ago. Tuberculous abscesses have long been studied and treated unsuccessfully. For the past four years Billroth has been steadily experimenting with different means of treatment till now he has reached a conclusion, which, as it is based on his enormous clinical experience, cannot fail to excite great interest. Contrary to the usual method, he cuts down upon the abscess and lays it widely open; draws off the pus and cleans out the remotest corners; follows up any fistula to its point of origin, and scrapes the lining surface of the abscess until all the so-called membrane is removed. Sometimes it is necessary to open a thigh from the popliteal space to the tuberosity, but thoroughness in regard to the fistulæ is absolutely necessary. He then waits until the bleeding has ceased, of course removing the Esmarch, if one has been used, and when the wound is glazed by the serum he fills the abscess cavity with an

emulsion of 10 parts of iodoform in 100 parts of glycerin. The edges of the wound are then brought together and stitched very carefully, so as to close the cavity perfectly without an opening for drainage. Thoroughly antiseptic dressings are applied and left on for several days. In most cases he gets primary union and the abscess heals, the iodoform emulsion being slowly absorbed as granulation goes on. Sometimes when antisepsis has been imperfect sloughing results, but even then the abscess generally heals from the bottom without recurrence. In a few cases the results were not good, but in these the operation was not sufficiently thorough, as some of the recesses were left untouched. Strange as it may seem, iodoform poisoning has been noticed in only a few cases, and in a very slight degree. Billroth has used the same method in tuberculous caries with equally good results, and now asks the profession to try the method. How does the iodoform act? It is known that iodoform is not a perfect antiseptic, but a most powerful stimulant of granulation. To use Billroth's words, "Iodoform exerts a great formative influence on the smaller vessels, and these soon begin to grow out and multiply in an extraordinary manner by constant production of offshoots and capillary loops. This energetic growth of the living tissue seems to rob the microbes of their nourishment; in the struggle for existence they succumb to the growing cells of the vessel walls." As granulations secrete pus only when diseased, drainage is unnecessary. When the method is used in caries the action is the same, the osteophytes in this case being stimulated.—*Vienna Letter, Medical News.*

EPILEPSY CAUSED BY IMPERFORATE HYMEN.—L.K. An intelligent, well-educated girl, about medium height, of slight build, and dark complexion, æt. 21., had for some three years suffered from falling fits. No history of fits or any cerebral infirmity on either side of the house. No history of any fall or blow upon the head. Four years ago she had what were thought to be dyspeptic attacks, at which time she suffered from backache, sickness, constipation, flushings, loss of appetite, abdominal pains, swelling and general discomfort, frequently from headache, and after a while from frequent desire to micturate. Prescribed: Pil. aloes et ferri. R Decoc. aloes co., mist. ferri aromat., spt. am. ar., aq. camph. ad ℥ viij.; ℥ j. c. i. pil. ter die; and ordered her to put her feet in mustard and warm water at bedtime, and place a large linseed and mustard poultice over both breasts at least one night in the week, at the same time to have a liberal diet, with plenty of milk. This, instead of relieving, seemed to aggravate the symptoms, which now assumed an intermittent character. She was completely prostrated for four or five days at a time, then she appeared to improve, and was, comparatively speaking, pretty comfortable for about three weeks, when the symptoms invariably returned in an aggravated form. On the night of May 10, 1886, she had been in bed about three hours when her mother was startled by hearing her scream; she immediately hastened to her assistance, and found her working in a fit; her eyes were fixed and staring, and she frothed considerably at the mouth. Before the nearest medical man arrived she had regained consciousness, and felt quite herself again, with the exception of a slight headache. The next day and the day following she was seized with similar attacks, and was then free from them for about five months; after that time the fits became more and more frequent, and during the last twelve months she has been attacked for a few days at the beginning and end of each month. Last month she has had as many as five fits in two days. Her appetite was bad, her bowels costive, urine clear and healthy-looking, but passed frequently in small quantities. She suffered frequently from headache, fulness after meals, flatulence, heart-beat, and a short dry cough, which was very troublesome at times. She had never menstruated, but thought it must have something to do with her present illness, as she suffered more at the beginning and end of each month than between times. I accordingly examined her in the dorsal position, and on inspection found the abdomen symmetrically enlarged and very prominent. On palpation, I could detect a central firm tumor well defined, evidently the uterus enlarged. On vaginal examination, I found the orifice obstructed by a distinct fluctuating swelling, which felt uncommonly like the unruptured membranes in labor, and which I had little doubt was an im-

perforate hymen distended by some fluid in the vagina. I had scarcely concluded my examination when the patient was seized with an epileptic fit, which lasted for over a minute; her features became distorted, the eyeballs turned up, the eyelids wide open, and the pupils dilated; the thumbs were shut close in the palms of the hands, and the limbs agitated by convulsive motions. This was succeeded by a kind of stupor and general feeling of lassitude.

Having cleansed the parts well with strong solution of Condy's fluid in warm water, I divided the imperforate hymen by a free incision, which immediately gave exit to a thick sanious discharge, and allowed me to wash out the uterus and vagina with a solution of permanganate of potash, after which I placed a firm pad over the hypogastrium and retained it in position with an obstetric binder. A plug of absorbent cotton saturated in a weak solution of carbolic acid in glycerine was placed in the vagina, and an opiate administered. The patient was kept in bed and ordered a low but nourishing diet. The uterus and vagina were well cleansed with Condy's fluid twice a day, the plug of absorbent cotton being changed each time. She made a wonderfully quick recovery, and at the end of ten days was allowed to get up. Though fourteen months have elapsed since the operation she has had none of her old troubles, and is perfectly free from anything like fits. Seven weeks after operation she menstruated for two days, but since that time the catamenia have been quite regular. She has gained weight, strength, color, and spirits to a wonderful degree, and may now, I think, be considered well.—*Lancet*, May 10, 1890.

A. ROTHROCK, M.D., McVeytown, Pa., says: I have prescribed Aletris Cordial in a case of threatened miscarriage. The woman had had three miscarriages in five years. Some six weeks ago she, being in her fifth month of pregnancy, was attacked with hemorrhage, bearing down pains, and all other symptoms of threatened miscarriage. I prescribed Aletris Cordial, which subdued the hemorrhage, bearing down pains, and all nervous symptoms that foreboded the old trouble, and at this time she promises to go to full term.

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, JULY 1, 1890.

TRINITY MEDICAL COLLEGE AND THE UNIVERSITY OF TORONTO.

An open letter was sent to the Minister of Education in March last, by one who was speaking in an official way, on behalf of Trinity Medical College. The writer criticized the actions of the members of the Senate of the University who organized its Medical Faculty in terms that were both rigorous and offensive. Under such circumstances, we are surely not assuming too much in contending that a reply should be allowed. In answer to that letter the PRACTITIONER published an editorial which Trinity's Dean characterizes, in a letter which appears in this issue, as a "very gross, absolutely unfounded, and most unwarrantable personal attack" upon himself. We have not made a personal attack, but have simply discussed his purely official words and acts.

The Dean's letter, though sufficiently lengthy, scarcely touches the main points we raised. A simple, absurd statement that an injustice to Trinity is acknowledged by nine-tenths of the profession is valueless, unless some proof of its correctness be given. The further statement that it is "not in accordance with sound political economy, directly or indirectly to aid in educating men for lucrative professions" is so marvellous that it scarcely deserves a serious answer. Surely no one will contend that our great Universities in all parts of the world are to absolutely close their doors to all young men who commence the study of law, engineering,

agriculture, or medicine. The old contention of 1850-1853, did not include such views, but simply the opinion that public moneys should not be spent in the endowment of purely professional chairs such as medicine, surgery, and the like. In the original Medical Faculty of the University such chairs were endowed; in the re-established Faculty they are not, and no one has asked that they shall get any assistance whatever from the Government.

The statements with reference to the teaching of chemistry and biology go to show that Trinity is placed at a disadvantage with reference to these important subjects. We quite agree with such statements. This was the general view of the members of the Senate in 1887, and this opinion was freely expressed to Trinity's representatives at that time. Such, we believe, is the opinion entertained by many members of the Senate at the present time. There is a strong feeling among the friends of higher education that the University should be absolutely open to all who are willing to avail themselves of its grand facilities in the department of science. The authorities have done all in their power to place these advantages at the disposal of all students in medicine. They are likely to pursue this broad and conciliatory policy in the future. They show no disposition to take a retrograde step; they evince no inclination to shut out any class of students from their lecture rooms and laboratories. Why does not Trinity treat Toronto's offers with at least ordinary courtesy, instead of indulging in endless rubbish about "traps," schemes, etc.

The Dean gives certain statistics which would apparently prove that while the whole percentage of the rejected by the Ontario Medical Council in the primary subjects was fifty this year, the percentage from one of the independent medical colleges was only twelve and a-half; and he thinks the other independent colleges can show very similar results. If this be true, Trinity will have nothing to fear. The students will soon see where they will get the teaching which will enable them to pass their examinations, and the University will have a poor chance. It is perhaps easy on the part of some to make such statements; but it is certainly very easy, on the other hand, to contradict them. We think it would be a good idea to get from the Registra of the Council the figures showing the comparative results from the different colleges at future examinations, and then we might discuss such details intelligently.

The Dean's references to his utterances respecting salaries of $2,000 with retiring allowances are certainly remarkable. He seems to have almost forgotten that there was ever anything said on the subject- Certainly others heard enough of it during the negotiations. Trinity's representative urged this aspect of the case very strongly. It was directly in conse quence of his contentions that the following words, to which we have before referred, were inserted in the original report of the Committee of the Senate: "The present salaries of Professors shall be maintained *pro rata;* and for the purpose of defining what is understood by salaries, the scale at present existing in Trinity's medical school shall be taken as the basis; and a practicable scheme for retiring allowances for the Professors shall be arranged." The Trinity atmosphere appeared to be impregnated with this idea. The Dean was deeply impressed with it—so much so that he was impelled to write it out and send it to a newspaper; and there it stands as evidence of the motive power that influenced Trinity's decision respecting questions connected with scientific medical education.

Some rather strong language is used with reference to an allusion to the Dean's attempt to destroy the Kingston Medical School some years ago, and our statement is called a "falsehood." We quoted the words of some of the authorities of that college, and if they ever discovered that they were indulging in falsehoods, it is about time they published a suitable apology. Unfortunately for the falsehood theory, the words of Trinity's telegram to the rebellious students will ever remain in the memories of the Professors of the Kingston College, and the humiliation to which the Faculty was subjected in consequence of that despatch, will never be forgotten. We have no desire to discuss now the details of that unfortunate episode, but have simply referred to it to show the absurdity of the Dean's position in pretending to speak for Kingston and London, and persistently endeavoring to create a spirit of antagonism on the part of these worthy institutions towards Toronto.

We sincerely hope that Trinity will soon learn sufficient wisdom to change her course. If she succeeded in making the "independent colleges" inimical to Toronto, no good could be accomplished thereby. If she recognizes the great advantages of the chemical and biological departments of the University, why does she not show a willingness to participate in the benefits to be derived therefrom? They have been offered to her—we believe they are still free to her. It is as certain as anything can be in this world that the University of Toronto will never close her doors against any class of young men because they happen to be medical students. Let Trinity Medical College accept the situation! If she chooses to remain aloof, that is her own affair. No outsiders have a right to complain. If she decides to avail her of the advantages which are and should be open to all, we think that no difficulties will be thrown in her way. Let her abandon her cries of "utter meanness and gross unfairness," and express her wishes in temperate and intelligent terms. If her students desire to come up to the University for certain courses, we think it would be easy to arrange matters connected with the question of fees from her students in a satisfactory manner. We cannot speak with any authority about such details, but we believe it to be the policy of the University, to avoid even the slightest appearance of injustice towards any of the educational institutions of this country.

THE MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

The Ontario Medical Association, though young in years, shows a remarkable amount of vigor. The tenth annual meeting, held in the building of the Ontario Medical Council, June 11 and 12, was in every respect a pronounced success. The attendance was large, exceeding in numbers that of any meeting of physicians previously held in any part of the Dominion. The interest was sustained without intermission from beginning to end. The proceedings were so smooth and even as to run like a machine. We have never seen so large a meeting where so many discussions were carried on with so little friction.

This success was, to a large extent, due to the enthusiasm manifested by the members of the profession from all parts of the Province. The doctors were there—from Ottawa to Sarnia, from Muddy York to Waubashene—from the east, the west, the south, and the north. Our distinguished visitors from the United States, especially from New York and Buffalo, contributed much to our intellectual enjoyment. While we have to acknowledge the valuable assistance derived from these various sources, we must not omit to give due credit to the executive management. The arrangements made before the meeting were simply complete. We had occasion to refer to these in a former issue, and we are pleased to know that our prognostications were absolutely correct.

A special reference in this connection is due to the President. He worked persistently after June of last year to bring this meeting to a successful issue. His opening address, a portion of which we publish in this number of the PRACTITIONER, was an admirable one. As a presiding officer he showed an unusual amount of tact and ability, which contributed much towards the success of the meeting. His conduct was such as to leave absolutely no opening for adverse criticism; on the contrary, it was worthy of all praise in every respect. He was ably assisted by the regular officers of the Association, and by many members of the various committees. The Secretary, Dr. Wishart, was a host in himself, and his untiring efforts were of great assistance to the President. The Assistant-Secretary, Dr. W. P. Caven, helped materially in the various arduous labors.

There was a sufficiency of papers, many of which were above the average, and the accompanying discussions were frequently interesting and instructive. There were three sessions per day, and, as a consequence, the pleasure of a constant attendance became sometimes almost a labor. Some think it would be better to abolish the evening sessions, but the majority appear to be well satisfied with the present arrangements. It can hardly be said that the reading of the reports of the numerous committees on the last night created any unbounded enthusiasm; but they did no harm—perhaps they did good—we are not sure.

The next meeting will be held in Toronto. It appears to be a matter of course that that city

is to be thus honored for some time to come, if not for ever. From the list of officers, which will be found in this issue, we have every reason to look for another successful meeting next year.

NOTES.

POST-GRADUATE classes have of late years been conducted successfully in Edinburgh. This autumn, classes of a practical character in connection with the hospital and laboratories, will be held. In most instances the attendance will be limited, and a definite fee payable. The success of the limited practical classes last year was so great as to warrant the expectation of a large increase in the coming autumn.

AN attempt is being made to afford efficient means for the medical education of women in Scotland. The University of Edinburgh will not admit women within her walls, nor will the medical faculty of Glasgow University extend its privileges to women; we note however, in a recent number of the *British Medical Journal*, that the authorities of the Queen Margaret College, Glasgow, are busily engaged preparing for a new departure, to be made in October, when the first session of a fully equipped medical school for women will be begun. The guarantee fund deemed necessary has been raised, and the other chief difficulties, that of a dissecting room and that of hospital accommodation, seem to be in a fair way of being solved.

Meeting of Medical Societies.

THE MEETING OF THE ONTARIO MEDICAL COUNCIL.

The annual meeting of the Ontario Medical Council commenced June 10th, in the Council Chamber, Toronto. The following were elected as officers for the ensuing year:

President—Dr. Moore, Brockville.

Vice-President—Dr. Williams.

Registrar—Dr. R. A. Pyne.

Treasurer—Dr. W. T. Aikins.

Committees—The various standing committees were appointed.

June 11.

Dr. Philip gave notice that he would move in the matter of the appointment of a prosecutor for the Council for the ensuing year.

Various communications and petitions were read, and referred to the respective committees.

Dr. Bray moved and Dr. Bergin seconded the following resolution: That the matter of decreasing the didactic lectures be referred to the Education Committee. The resolution was adopted.

Moved by Dr. Harris, seconded by Dr. Russell, that the Finance Committee take into consideration the question of increasing the salary of the registrar. Carried.

A motion by Dr. Rogers referring the tariff of fees adopted by the Bathurst and Rideau divisions to the Finance Committee, was also carried.

It was moved by Dr. Rogers, and seconded by Dr. Bergin, that the Committee on Finance be directed to investigate the case of one Merkim, and that the registrar shall receive from the solicitor of the Council a copy of the agreement entered into by his firm in this matter, a copy of the agreement entered into by Merkim and his solicitors, a copy of the evidence from the Police Court in Ottawa, wherein the said Merkim was fined in the sum of $75, together with a copy of all communications or other papers bearing on the question, all of which papers to be placed before the said committee, who shall forthwith report thereon to the Council. The resolution was adopted.

Dr. Rogers made enquiry whether the clause on page 125 of the announcement of 1890 regarding British licentiates was correct. The registrar was instructed to reply that it was correct in the announcement of 1890-91.

The Council then went into Committee of the Whole, with Dr. Bergin in the chair, to consider the report of the Education Committee. The report stated that at the final spring examinations, 182 candidates presented themselves, of whom 125 passed. At the primary examination 208 candidates came up, of whom 106 passed. The Board of Examiners had sent a recommendation to the committee to the effect that it was desirable that gross mistakes in spelling should be taken into account in valuing the papers of the candidates at the examinations. The committee advised the insertion of a clause

in p. 17 of the rules dealing with the whole matter.

June 12.

Mr. W. Webb was re-appointed prosecutor for the Council for the ensuing year. On motion of Dr. Fowler, seconded by Dr. Johnson, a by-law was read and passed authorizing the Council to appoint a committee of discipline to carry out the provisions of the Act of the Ontario Legislature of 1887. The following were appointed the members of the committee: Dr. Day, Toronto; Dr. Bray, Chatham; and Dr. Logan, Ottawa. Dr. Henry moved, and Dr. Orr seconded, that this Council desires to place on record its entire disapproval of lodge and contract doctoring, believing that such practices are beneath the honor and dignity of the profession, and further express the hope that members of the medical profession of Ontario will see their way clear, in their own interests and that of the profession, to sever all connection with said institutions. The motion was withdrawn on the ground that the Council had not he power to deal with the matter. On the motion of Dr. Logan, seconded by Dr. Henderson, the following resolution was adopted: That this Council takes steps to ascertain on what conditions medical reciprocity can be had with the various provinces of the Dominion of Canada.

June 13.

On the recommendation of the Committee on Education, it was resolved that one year's notice should be given to students of any changes in the curriculum. If any candidate in the future disregards the rules under which the examinations are conducted, at the discretion of the Council he may be debarred from further enjoying the privileges of the Council.

Henry Macklen was declared to have taken a sufficient number of marks to warrant his being placed in the pass list of the recent examination in operative surgery.

The following were appointed examiners for the ensuing year:—

Dr. F. Grasett, Toronto, Descriptive Anatomy; Dr. Saunders, Kingston, Theory and Practice of Medicine, Therapeutics and General Pathology; Dr. W. J. Wilson, Richmond Hill, Midwifery, operative and other than operative, with Puerperal and Infantile Diseases; Dr. Anson S. Fraser, Sarnia, Physiology and Histology; Dr. Burt, Paris, Surgery, operative and other than operative; Dr. W. Waugh, London, Medical and Surgical Anatomy; Dr. Oldright, Toronto, Theoretical and Practical Chemistry and Toxicology; D. A. McKinnon, Guelph, Materia Medica and Pharmacy; Dr. W. H. Emory, Toronto, Medical Jurisprudence and Sanitary Science; Dr. C. O'Reilly, Toronto, Assistant Examiner to the Examiner on Surgery; Dr. E. Hooper, Kingston, Assistant Examiner to the Examiner on Medicine and Pathology; Dr. F. D. Caufield, Ingersoll, Homœopathic Examiner; Dr. Pyne, Registrar; and Drs. Thorburn, Bray, Bergin, Johnson, and Oliphant, were appointed a committee to enter into communication with Canadian and other Universities with a view of obtaining all the information possible regarding the curricula and standing of these institutions.

The report of the Finance Committee showed that a balance of $57.71 was in the Bank of Commerce to the credit of the Council, and the assets amount to $46,240.58 more than the liabilities.

The salary of the Registrar, Dr. R. A. Pyne, was placed at $1,800 per annum.

At the night session it was moved by Dr. Bergin, and seconded by Dr. Bray, that this Council do petition the Legislature of Ontario for power to increase the annual fees payable by each member of the college, and for power to erase from the register the names of all members who fail to pay the annual dues, such names to be restored upon payment of the fees due.

Some discussion arose over this resolution, but the speakers directed their remarks chiefly to the manner in which members of the Legislature had privately received some of the proposals of the medical men, who acted at the Legislature for the Council when the last Medical Act was before the House. It was stated that some of the members of the Provincial Parliament were of opinion that the requests of the Council tended towards class legislation, and that if these were passed they would move to sweep away all such special powers, and make "free trade" in the medical profession. The doctors in the Legislature, it was said, were the chief opponents of the proposals of the Medical Council.

The motion was adopted on the following division :—

Yeas—Drs. Bergin, Bray, Campbell, Day, Fenwick, Fowler, Henderson, Logan, Lutin, Oliphant, Thorburn, Williams, Rogers.

Nays—Drs. Britton, Geikie, Harris, Russell.

Drs. Bergin, Day, Thorburn, and Oliphant were appointed a committee to endeaver to carry out the terms of the resolution.

On the report of the Committee on Discipline, the Council deferred taking any action on its complaints against Dr. B. H. Lemon until the next meeting, and on resolution also suspended proceedings against Dr. Nelson Washington until same time. The complaint against Dr. James Cook Bright was allowed to stand in abeyance, and it was reported that no action could be taken against Dr. John McKeown, as he could not be found.

The Council then adjourned at half-past ten o'clock, to meet again on Saturday morning at ten o'clock.

June 14.

Dr. H. H. Wright was appointed Warden of the council buildings, and Dr. Oldright was appointed Examiner in Chemistry, instead of Dr. George Acheson. Dr. J. MacArthur, a member of the Council, tendered his resignation as representative of Tecumseh Division No. 2.

According to the Ontario Medical Act, "Any graduate or any student, having matriculated in any university in her Majesty's dominions, shall not be required to pass the preliminary examination of the Medical Council." It is felt by some of the medical men that this section of the Act would hamper the Council if an attempt, were made to raise the standard of the preliminary examination, as candidates would then write on some university matriculation examination.

Dr. Rogers moved, and Dr. Campbell seconded, that this section in the Act be so amended as to read, "Any graduate in Arts in any university in her Majesty's dominions shall not be required to pass the preliminary examination." The motion was carried and placed in the hands of the Legislative Committee.

DR. C. MACLACHLAN (Tor., '89) is practising in New Rockford, N.D.

THE ONTARIO MEDICAL ASSOCIATION.

Toronto, Wednesday morning,
June 11th, 1890.

The President, Dr. Temple, in the chair.

The meeting was called to order, and Dr. Wishart read the minutes of the last annual meeting; the reports of several of the committees were presented, after which the ordinary work of the session was proceeded with.

Dr. Trow, of Toronto, read a paper entitled

THE DIAGNOSIS AND LOCAL TREATMENT OF TUBERCLE, OR SO-CALLED PHTHISIS OF THE LARYNX.

The paper dealt fully with the symptoms and signs in the laryngeal affections, and the author advocated such remedial measures as have been found useful by specialists of large experience in these diseases. Criticisms were advanced by Dr. Price Brown and Dr. Palmer; the former emphasized the statement that amelioration could and ought to be attained for the unfortunate victims of this distressing condition, and further, he believed that in some cases actual cure could be accomplished. He also stated that the voice-changes, such as the occurrence of a falsetto character in phonation, were a help in diagnosis. Dr. Palmer deprecated the use of the ordinary curette, and advocated in preference the double curette, on the ground that the latter cuts and does not injure or bruise the tissues.

Dr. Ryerson stated that, in his opinion, the prognosis was always bad; amelioration was possible, but not cure.

Dr. Osborne, of Hamilton, advised that in patients suffering from dysphagia, the individual should be fed whilst lying on the back with head extended.

Dr. Jenner, of Kingsville, read a paper entitled

MORTON'S METHOD IN SPINA BIFIDA.

He related a case of spina bifida in a child whom he treated when three weeks old. The result was satisfactory, leading to considerable diminution in the size of the tumor, and to solidification of its contents.

Dr. Burt, of Paris, related a case in which he had successfully ligated the tumor and cut off the sac.

AFTERNOON SESSION.

Dr. Temple delivered his Presidential Address, which appears at page 295 of this journal.

Dr. Emmett, of New York, read a paper on

LACERATIONS OF THE CERVIX UTERI, AND THE INDICATIONS FOR ITS RESTORATION.

This paper will appear in full in the columns of THE CANADIAN PRACTITIONER.

Dr. Roseburgh, of Hamilton, never had succeeded in treating lacerations of the cervix by mere local applications; he only succeeded by operative procedure.

Drs. Temple and J. F. W. Ross, who also spoke, thoroughly concurred with Dr. Emmett in the views expressed in his paper.

SURGICAL SECTION.

Dr. Burt, of Paris, in the chair.

Dr. Dupuis, of Kingston, presented his paper on

TRAUMATIC TETANUS AND ITS TREATMENT.

He had come in contact with five cases of this terrible disease during fifteen years of surgical practice. The cause of the malady is obscure. Dr. Dupuis favors the view that reflex nerve irritation, set up by an injury, is the chief factor in its development, and he does not think that the presence of micro-organisms is accountable for its occurrence. A case successfully treated was narrated; various drugs were administered during a long struggle of 58 days duration; the treatment which benefited him most was that of large doses of bromide of potassium, assafœtida, tincture of aconite, and chloral hydrate, together with the free hypodermic use of morphine, and free purgation with calomel and jalap.

Dr. Lovett, of Ayr, referred to the difficulty of diagnosis which sometimes arises between so-called idiopathic tetanus and strychnia poisoning.

Hon. Dr. Sullivan referred to the statistics of the American war, where it was found that tetanus most frequently occurred on the first day after the injury was received; next in frequency from the fifth to the eighth day.

Dr. Bowlby, of Waterford, related a case where tetanus followed in a few hours after a slight injury to the foot; the symptoms threatened for two days, but were successfully combatted.

Dr. Cronan, of Buffalo, places traumatic tetanus among the incurable diseases; he never saw a case recover. Idiopathic tetanus is, however, sometimes cured.

Dr. Britton, of Toronto, instanced a case which he judged was one of true idiopathic tetanus.

Dr. B. E. Mackenzie, of Toronto, then read his paper on

THE MANAGEMENT OF TALIPES.

This paper was an exhaustive account of the condition, more particularly of talipes equinovarus; the anatomy of the deformity was fully discussed, and the operative treatment in cases of exaggerated deformity and of long standing was very fully considered. Two cases recently operated upon were exhibited, one of which, a boy, 16 years old, had been submitted to an extensive operation; division of all the structures tense on the inner side of the foot had been fully made, and the foot then put up in plaster of Paris.

Dr. A. B. Osborne, of Hamilton, read a paper on

A CASE OF CONVERGENT STRABISMUS WITH CROSSED DIPLOPIA,

and the section was adjourned after Dr. Welford had read his paper on scrotal tumors, in which he related some cases of hydrocele, presenting some peculiar characteristics.

MEDICAL SECTION.

Dr. Sheard in the chair.

Dr. Gillies, of Teeswater, read a paper on

RHEUMATIC HYPERPYREXIA,

which elicited discussion from Drs. McPhedran, Saunders, Sheard, Hunter, and others.

Dr. McPhedran, of Toronto, read a paper on

ARTHRITIC HÆMOPTYSIS.

The author in this paper referred to hæmoptysis in elderly people in absence of tubercular and cardiac disease. Sir Andrew Clark had described the condition; he found changes in the vessel walls similar to those changes found in the vessels of diseased articulations, and hence he suggested the name of arthritic hæmoptysis. Dr. McPhedran narrated a case which probably belonged to this interesting class—a patient, aged sixty, the subject of repeated hemorrhages. The bleeding in such cases is aggravated by large doses of astringents and other means

usually followed in hæmoptysis. The indications for treatment are elimination from the blood of waste products, which the hard pulse and scanty urine show to be in excess in that fluid, and which in all probability were largely, if not wholly, the immediate etiological factor in the production of the hemorrhage. With this object in view, sulphate of magnesia was given freely and nitro-glycerine to relax the arterial tension. This treatment is followed by marked benefit.

Dr. Saunders, of Kingston, read a paper on

PAROXYSMAL HÆMATURIA

A case was quoted in which microscopic examination failed to detect any blood corpuscles in the urine. The patient had a marked icteric tint, which seemed to indicate that free hæmoglobin was present in the blood, and that dissolution of the blood corpuscles occurred in the systemic circulation, and was not confined to the kidneys. The urine readily gave the blood reaction on applying the guaicacum test. The attacks of hæmaturia occurred with variable frequency, sometimes daily, sometimes not for several days. The patient became the victim of the prevailing influenza in January; an attack of hæmaturia was succeeded by oozing of blood from the gums and frequent passing of black, tarry stools; this persisted for several days, in spite of treatment, and patient died A post-mortem examination revealed the left kidney twice its natural size, the pelvis filled with soft fat, which nearly obliterated its cavity; nearly the whole of the medullary and the greater part of the cortical substance was infiltrated with fat, and few small patches only retained their normal appearance.

(*To be continued.*)

Hospital Reports.

EPITHELIOMA OF THE EAR, FOLLOWING FROST-BITE. AMPUTATION OF THE PINNA.

UNDER THE CARE OF A. H. WRIGHT, B.A., M.D., M.R.C.S., IN THE TORONTO GENERAL HOSPITAL.

W. W., æt. 55, male, farmer, a strong, well developed man, admitted into the wards of the hospital on June 18th, with the following history: His ears were both badly frozen twenty-eight years ago, and they remained somewhat thickened and swollen ever since. Eight years ago a little depression appeared at the upper and posterior portion of the tip of the right ear; this was of the color of a mole, but was rough like a wart; a scab would form and come off occasionally. The ear remained in this condition for four years, at the end of which time it looked like a small wart with little round "seeds" in it. Three years ago removal of the growth was advised, but it was allowed to remain until November, 1888, when the diseased portion of the pinna was cut out. The wound healed well. It began to re-appear in August, 1889, and, three months after, discharge began to come away from it. A caustic paste was applied for four months, but the condition became worse under treatment. The disease having extended considerably, the patient decided to come to the hospital for operation.

The family history is good, no cancer among the patient's relatives.

On admission, the right pinna presented a peculiar appearance; it was purple in color, as if engorged with venous blood, the tissues were thickened very considerably, and felt like a piece of leather, when grasped between the finger and thumb. The whole pinna presented these unhealthy features, with the exception of the tragus and the lobule, whtch were perfectly normal in appearance. There was a notch in the posterior and upper portion of the pinna, the seat of the former operation. The tissues at the base of this notch were ulcerated, presenting a raw, uneven surface, and a portion of the helix both in front and behind the notch was in the same condition. On the inner aspect of the pinna, just below the notch, was a small sloughing surface about the size of a fine cent piece. The thickening of the tissues was very much greater at the base of the notch than elsewhere in the pinna. There were no glandular indications detected. The left ear, which had also been frost-bitten, was somewhat thickened and dark in color, but there was no ulcerative process nor marked growth in it.

Amputation of the pinna was advocated, and was performed by Dr. Wright, on June 19th, in the following manner: A vertical incision was carried through healthy integument at the bottom

of the concha, one-quarter inch behind the external auditory meatus; this was carried vertically upwards over the helix, and down on the inner aspect of the ear, close to the bottom of the sulcus, between the pinna and the scalp. The incision was then continued through the posterior portion of the lobule until the starting point was again reached. The integument was now dissected up towards the meatus anteriorly, and towards the scalp posteriorly, and the cartilaginous portion of the pinna was then completely cut through, and the amputation thus completed. The greater part of the lobule was left, and the tragus, these portions being quite unaffected by the disease. The flaps were now brought together accurately by interrupted suture and an antiseptic dressing applied. Bleeding was remarkably profuse during the operation; the cut vessels were, however, readily secured, and either twisted or ligated. The wound healed readily by first intention.

Correspondence.

TRINITY MEDICAL COLLEGE AND THE UNIVERSITY OF TORONTO.

Editor of CANADIAN PRACTITIONER:

In your issue of June 2nd, you have a long editorial based on a letter addressed by me in March, 1890, to the Hon. the Minister of Education. The *very gross*, *absolutely unfounded* and *most unwarrantable* personal attack which you made upon me, I shall notice no further than to remark that it shows not only very bad taste, but also a very *weak* cause, which has to resort to personal detraction of a writer, who complains only of a gross *public* injustice done to all our independent chartered Medical Colleges. This injustice is acknowledged with regret by nine-tenths of the profession, and by as large a proportion of the public interested in such matters. The letter referred to was a reply to an official communication received shortly before from the Minister of Education, and *pointed out* the wrong complained of, as well as *proved it*, by reference to printed parliamentary records and by figures, the correctness of which cannot be contradicted.

The injustice done to all the independent Medical Colleges of Ontario has arisen from the restoration, in 1887, of a Medical Department to the University of Toronto, without these institutions having been fully and *separately* or even *at all* consulted beforehand, as they certainly should have been. If, when the restoration was effected, there had not been several long-established chartered Medical Colleges in full and successful operation, there would have been less cause for complaint. Under such circumstances the restoration would have been required, the public and the profession would have asked for it, and it could not, by any possibility, have affected injuriously the vested rights and privileges of sister institutions, which on that supposition would have had no existence. But the very reverse of all this was the fact.

It is well known that the Parliament of Canada in 1853 abolished the medical department of the University of Toronto, on the express ground *that it was not in accordance with sound political economy, directly or indirectly to aid in educating men for lucrative professions, as this was done even at that early day to a sufficient extent in Colleges and Schools conducted entirely by private enterprise.* And up to 1887 the Government of Ontario continued to carry out this same policy, and for the very same reasons; and since 1853 several teaching medical corporations have been established and have incurred very heavy expenditure in the erection and equipment of suitable buildings and laboratories, and have attained to a very high degree of efficiency and success, reached after many years of very ill-remunerated work on the part of their teachers.

I said in my letter to the Minister, and here repeat it, "that the change made in 1887 was not asked for by the country at large. It is emphatically true, that beyond a very few personally interested individuals, chiefly in Toronto, and notably several members of the late Toronto School of Medicine, who were on the Senate at the time, and all of whom became members of the new 'Faculty,' which they gave their influence to create—the changes made were neither asked for nor needed by the profession or by the public. There was no dearth of well educated young doctors to meet

every possible want of the Province—indeed, then as now, large numbers of our young medical men look to the United States and to other countries in search of a wider field in which to practise." In your editorial, you allude to a proposal made to Trinity Medical College in 1887 to suspend her charter, and amalgamate with the Toronto School of Medicine to form the new "University Faculty." For many good reasons this was declined. The entire Faculty discussed the scheme fully, and unanimously reached the conclusion that it was "unpractical" and "impracticable." Indeed, not a few members of the Faculty, who knew all about the *proposal* and its *origin*, considered it a mere trap, falling into which would have destroyed the identity of Trinity Medical College, to which institution, in his letter to me, the Minister pays the warm tribute of having "*already contributed greatly to the improvement of the medical education of the Province.*"

You find fault with me for using the term "trap" in reference to the "amalgamation" proposed to Trinity Medical College by a Committee of the Senate of the University of Toronto, and most incorrectly speak of this expression as casting a slur upon many very honorable and well known gentlemen who were members of that Committee. Now, I am quite certain that *most* of the gentlemen you name regarded the proposal in question as an excellent one, and that they had not the remotest idea of anything being in it which was not, in their opinion, calculated to promote the best interests *of the University*, *first*, *of course*, but likewise of all concerned.

But the plan proposed was a "scheme" nevertheless, editorially advocated in your journal at its rise, then persistently pressed upon the Minister of Education by gentlemen, several of whom are now members of the restored "*Faculty;*" and it was so pressed, not at all in the interest of Trinity Medical College nor of her Professors, but simply in promotion of their own, which, by an easy and most natural process of reasoning, they soon came to regard as identical with those of the University of Toronto.

For Trinity Medical College to have become a party to the proposed "scheme" (for this was the term constantly made use of in private conversation by its promoters), would have been simply not only folly, but annihilation, suicide, or any other stronger term, if such can be found, to express self-destruction.

You quote with great gusto the concluding sentences of another old letter of mine, to the effect "that it will be time enough to give full consideration to the subject of amalgamating the two Medical Colleges in Toronto when the Government and Legislature of Ontario shall have fully decided to 'create, equip and liberally endow, a new Medical teaching body,' giving a salary of not less than $2,000 a year, and a good retiring allowance to each professor, when from age or ill-health, he is no longer fit for duty."

On first reading your article, I could not remember having written thus; but quite accidentally I have since come across a letter I sent to one of the city papers, dated March 28th, 1887. At that time we had heard that a good deal was then being said and done by the promoters of the "scheme," but this was just before Trinity Medical College had heard officially from the Senate's Committee on the subject. Now, *could* you not, *should* you not, have been ingenuous enough to say, in giving the closing sentences of that letter, that it was the end of a communication written for the sole purpose of showing, from every possible point of view, how *unwise* and how *undesirable* it would be to *restore a Medical Faculty to Toronto University*, and thus reduce that institution in Medicine from the truly *Provincial* position she had so long occupied, as a centre round which many distinct affiliated Medical institutions may cluster, each sending up to her from time to time, its quota of candidates for examination and degrees, to that which she now holds, of a mere local Medical College, competing eagerly for students, as would inevitably be the case if the proposed "restoration" should ever become an accomplished fact? In this very letter are al o the words, and why did you not quote these as well as the others? Supposing the "Medical Faculty" to have been "restored," I add: "All other Medical Schools may not subside at once as expected, and its policy (that of the supposed 'Faculty') would, indeed must, be to belittle, and if possible to *destroy*, other schools, by virtue of the supposed over-

shadowing auspices under which it would be set agoing, and the *public aid* it would count upon receiving."

I ended this letter as I did because I regarded, *and this too on very high authority*, the *conditions* supposed by me as to "endowing and equipping," and the giving of the salaries and retiring allowances referred to, as just as unlikely to occur as would be the appointment of the Editor of THE CANADIAN PRACTITIONER as Accoucheur-in-Chief to the Royal Family of Liliput or of Brobdignag.

I never have, and never will, cherish other than the kindliest feeling towards all sister institutions, including under this term not only all our Medical Colleges, but *all* our Universities as well. It is for the good of our country at large that all of them should continue to prosper in the highest degree, and I would not wrong or injure one of them by doing or suggesting anything which I would not be quite willing to have carried out in my own College. But, as head of one of our Medical Colleges, I do very strongly object, and will continue with all the energy I have to protest against any *one teaching Medical College or Faculty* in the Province having, or trying to secure, any undue advantage over the others, such as that arising from its being constituted an integral part of the state-supported Provincial University. I do so because in Ontario, with her several independent Medical Colleges in operation, it is very unjust to these institutions that, after an interval of nearly forty years, during which all our Medical Colleges have been, as was right, on a footing of perfect equality, one of them (it matters not which) should be placed in a position which may be looked upon by some as having a certain prestige connected with it. This is manifestly most unfair to all the rest.

Further, it *can* and *has been* proved that *public funds have been* and *are being* largely used, although not *openly* or in a *direct, straightforward* way, to promote medical education for the benefit of this one medical teaching "Faculty" in the new position in which the "restoration" has placed it. For it is well known that the new lecture rooms and laboratories in the Biological Department of Toronto University are very largely used for medical teaching purposes. Every medical student who attends classes in this building (which, as part of the Provincial University, is supposed, as it should, to belong as much to one Medical College as to another) is enrolled as a *student of the Medical Department of Toronto University*. And, further, by University statute, *approved of by Government before it could come in force*, all fees paid by medical students attending the Biological Department go into the funds of the "Medical Faculty" and *not* into the "general funds" of the University. All the instruction these medical students get in this department is given by teachers belonging to the *Arts* Department, who are paid entirely by salaries, drawn, as in the case of all the other *Arts* professors, from the latter source. Thus certain Arts professors earn a large amount of medical students' fees, which amount goes *not* to the University, the needs of which are said to be great, but to be distributed in a proportion to be fixed by University statute, to various members of the Medical Faculty who do not earn any part of it, and who do not teach the subjects for which it is paid. (For the Statute, and the proportions given to each, and the list of *names* of those who share the fees, see Ontario Sessional Papers, 1887, No. 52, page 110.)

How largely this University "Medical Faculty" is subsidized in this way, it is easy to show. (For the fees, see University Medical Calendar for 1889–90, page 30.)

A class of 240, including all the *four* years, would be a moderate estimate. This will give 60 medical students in each year. Total fees paid by each first-year student, $73. Of this sum, $12 is paid for Physiology, $12 for Chemistry, $5 for Practical Chemistry, and $5 for Biology (including Zoology and Botany). The teaching in the branches named is *all done in the Biological Department by University-salaried professors*, who receive no portion of these fees, amounting to $34 for each first-year student. $34 × 60 = $2040 is this paid into the *University Medical Faculty Fund* by first-year students, for work not done by the purely medical teachers, though they get *all the fees for it.*

In the second year, it is much the same. $76 is the total amount of fees payable. Of this, the branches taught in the Biological Department are: Chemistry and Physiology, $12 each; Histology, $8, and Medical Chemistry,

$5, in all $37 × 60 = $2220, paid into Medical Faculty funds for second-year's fees, all earned by University-paid (Arts) teachers.

$2040 first year's fees.
2220 second "

$4260 paid into the *Medical Faculty Funds* each year, from first and second years' men alone.

This is positive proof, therefore, that the Biological Department of the Provincial University is hard at work earning a large yearly *bonus* for this one Medical Faculty, which *bonus* the fees of every medical student, wherever he may come from, goes to swell, while for the *other* Medical Colleges it does absolutely nothing, but is used as a bait to draw away their students if possible. Even the Women's Medical College in Toronto, where the Faculty get nothing, or next to nothing, for their hard and good work, had. last winter numbers of her students thus drawn off, their fees going to increase the *Medical Faculty bonus*, and their names to swell the numbers in attendance.

It will be observed that all the "subsidizing" and medical teaching in buildings erected with *public funds* just referred to is in connection with some of the *primary branches* of the curriculum. It is consoling to the independent medical colleges to know that at the recent medical council examinations, where the competition is perfectly fair, and between students from all colleges, the standing taken by students coming from these colleges was such as to prove that while the *subsidizing* referred to, and the *buildings erected out of public funds* is a glaring injustice, the teaching given in these independent colleges, who build and equip their own laboratories, etc., etc., is fully abreast of any in the Province. For the one candidate who took honors *this* year and the *two* who took honors *last* year came from an independent medical college; and while the *average* percentage of *rejections* in the primary examinations of the *council* this year was 50, the percentage of primary students from the only independent college regarding which I have been able to procure accurate information who failed in their examinations was only *twelve and a half*; and I have no doubt that the other independent medical colleges can show very similar results. This fact alone not only speaks volumes *against* the great *wrong*, the manifest *unfairness* which is done these independent colleges on the one hand, and in favor of the *great excellence of their teaching*, despite this injustice, on the other.

Your assertion as to my having "attempted" years ago "to destroy the Kingston Medical School" is absolutely without any foundation. In March, 1883, THE CANADIAN PRACTITIONER published a full explanation of the circumstances you allude to. At that time, also, one of the then Editors of THE PRACTITIONER, who was every inch a gentleman, called upon me and asked me regarding the matter. I showed him and told him all I knew, which was exceedingly little, and he expressed himself disgusted and surprised at any one having tried to stir up strife by attempting to make *something* out of *nothing*. I have a copy still by me of the letter published by THE PRACTITIONER, either in the March or April number, 1883, and to this letter I refer anyone who wishes to know anything further about an old falsehood, which long ago was shown to be such. Your object in reviving it is evidently the amiable one of trying to kindle unfriendly feelings towards my colleagues and myself amongst the Kingston faculty; but happily this cannot easily be done, and not at all, by a method which all will agree with me in characterising as most contemptible.

As this is a purely *public*, and in no sense a *personal* matter, I have calmly, and without any personalities, fully answered all that seems to call for notice in your editorial.

Your reference to "Hysteria," "Hyperæsthesia," etc., are entirely out of place, as is also your use of the term "Valley of Despair." I have no anxiety or fear of any kind for the future, for I think far too highly of the innate sense of justice on the part of the public, the Legislature, and the medical profession of Ontario, to be in the least afraid that the wrongs now complained of by our independent medical colleges will be of long duration.

I think highly enough of the University of Toronto also to hope that at no distant day she will again be in medicine an examining and degree-conferring body only, having every one of our medical colleges affiliated with her, each of these having *one*, and by law (like the law of the medical council) *only one* representative on

her Senate. *Then* the University would be equally interested in *every* medical college, and the interest would be reciprocal, and a far better state of things would be established than the present, which by seeking to have unfair advantages secured to one teaching body has given rise to much-ill will and heartburning, which, but for this, never *would*, as it never *should*, have arisen. Under such circumstances, any public laboratories which the Government may erect would be conducted, as they should be, by teachers just as much interested in one medical college as in another, and be thus truly *Provincial* in their scope and work.

These changes could be readily effected without injury to the recently constituted "Medical Faculty" of the University. This was formed, as you say in a recent number of your journal, by taking in the old Toronto School of Medicine, and that corporation can easily go back once more to its former and normal position. In 1854 or 1855 this same corporation became the *Medical Department of Victoria University*, and in 1856 it reassumed its old name, and continued, as a teaching medical school, working cordially with other teaching colleges up to 1887, when it became once more a "University Faculty," this time that of the University of Toronto.

In law, the corporation of the Toronto School of Medicine is still in existence, and any day a majority of their members might, if they saw fit, make still another change, and set up the old school on an independent basis under its own name—and who knows but some day in the near future this may happen again, as it did before.

Faithfully yours,

WALTER B. GEIKIE.

June 17th, 1890.

Personal.

DR. JOSEPH CARBERT, formerly of Orangeville, has removed to Toronto.

DR. G. R. CRUICKSHANK, (Tor. 1886), formerly practising in Ellesmere, York Co., has recently returned from England, where he spent a few months, and has settled in Windsor, Ont.

DR. ALICE MCGILLIVRAY, formerly of Hamilton, is now practising in Chicago.

DR. WM. MCGILLIVRAY, (Tor. 1890), has commenced practice in Whitby.

DR. HORACE A. YOUMANS, (Tor. '89), has commenced practice at Deseronto.

DR. H. W. ARMSTRONG (Trin., '89) has gone into partnership with Dr. Gerald O'Reilly, of Fergus.

DR. A. R. GORDON, (Tor. 1890), has gone to the Old Country. He will spend some time in Edinburgh and London.

DR. T. S. COVERNTON and Dr. Low have been appointed assistants to Dr. Sprague, the Surgeon of the Police Force of Toronto.

AT the recent election for the Provincial Legislature in British Columbia, Dr. G.L. Milne was elected as one of the members for Victoria.

DR. J. L. BRAY, of Chatham, has been honoured by his Alma Mater by being made a Fellow of the Royal College of Physicians and Surgeons of Kingston.

DR. F. R. ECCLES, of London, left home for England May 16. He is spending some weeks at Birmingham, where he is acting as assistant to Mr. Lawson Tait. He will probably leave Birmingham some time in July.

DR. OLDRIGHT, of Toronto, on being notified of his appointment as examiner in Chemistry for the Ontario Medical Council, very promptly and very properly refused to act.

Births, Marriages, and Deaths.

BIRTHS.

MEIKLE.—At Mount Forest, on June 20, Mrs. T. D. Meikle, of a daughter.

WILSON.—At Edmonton, Alberta, N.W.T., on Saturday, June 1st, the wife of Dr. H. C. Wilson, Speaker of N. W. Council, of a daughter.

MARRIAGES.

CARR–ANDERSON.—At 82 Hunter street, Hamilton, on June 17th, by Rev. A. Anderson, Dr. Leeming Carr, of Stoney Creek, to Kate, eldest daughter of Mr. Duncan Anderson.

HALLIDAY–SHAW.—On Wednesday, June 25, in St. John's Church, Port Perry, by the Rev. J. McMechan, A. H. Halliday, M.D., of Bellwood, Ont., to Miss Lottie Shaw, of Port Perry.

HAULTAIN–DENNISTON.—At "Castleknock," Peterborough, on Wednesday, June 25th, 1890, by the Rev. E. F. Torrance, M.A., Henrietta Eleanor, eldest daughter of the late James F. Dennistoun, Q.C., to Charles Selby Haultain, M.D., of the North-west Mounted Police, and second son of Major-General F M. Haultain, of London, England, late of the Madras Staff Corps.

DEATHS.

ROSS.—On Friday, June 20th, 1890, Anne Jane, wife of Dr. James Ross, sr., 92 Sherbourne street, Toronto, aged 62 years.

Miscellaneous.

STIMULATING EFFECTS OF BROWN-SEQUARD ELIXIR.—

A man in St. Paul,
Quite feeble and smaul,
Having lost all his gaul
Could not pummel his wife
Now, through "Sequard's elixir,"
He beats and he kixer,
And sometimes 'e lixer
Within an inch of her life.

—*Kansas City Globe.*

A DEJECTED CANDIDATE.—The examiner in art anatomy at South Kensington sends us the following pathetic refrain, which had been placed at the end of a candidate's paper:

"Fytte I.

I'm a miserable muddler,
I don't know any more.
You've hit my very weakest point,
And my heart is very sore.

Fytte II.

knew the arm, I knew the leg,
But you have not come near it;
So I deserve to fail, I s'pose,
And try and grin and bear it."

WYETH'S LIQUID MALT EXTRACT.—It is claimed that this liquid malt extract contains all the nutritive virtues of the best malt liquors, while free from any stimulating effects. It is especially adapted for administration to nursing mothers and children, to persons suffering from nervous exhaustion, and to those unable to digest starchy food.

THE YALE HOME HOSPITAL.—It is proposed by Dr. Seaver, of New Haven, to erect a students' hospital at Yale College. The annual attendance of students has now increased to such proportions that there are always more or less sick ones, who need better attention than it is possible for them to obtain in their own rooms. The college physician estimates that the initial running expenses can be met by a fund, which will yield $700 or $800 per annum, in addition to such moderate charges as can be paid by the invalid students, who are brought to the hospital.

A TOUCH OF NATURE.

The doctor says I'm careless,
And Bridget says, "That's so,"
And nurse says I am naughty,
And mother says, "Oh, no!"

I know I shan't get better,
I think I'm going to die,
I have a dreadful ear-ache
That almost makes me cry.

I don't know how to bear it;
I really can't! O dear!
I think I'd stand it better
If 't were the other ear!

St Nicholas.

BICYCLING FOR YOUNG PEOPLE.—Dr. W. B. Richardson discusses this subject in a recent issue of the *Æsclepiad* (*Med. Record*, April 5th 1890). He admits that since he first warned the public of the dangers of immoderate cycling, changes have taken place in the construction both of bicycles and tricycles, which materially modify the old drawbacks. He is still, however, of opinion that cycling should never be practised by boys and girls, since it differs from other exercises in the facts that it moulds the bodily framework, as it were, to its own mode of motion; and riders in course of time almost invariably acquire what he calls "the cyclist's figure," which is not graceful, and is not indicative of the possession of perfectly balanced powers. Of two things at least he is satisfied. They are that the temptation of competition is to an earnest and practiced cyclist a "demon of danger," and that the systematic pursuit of cycling should never be fully commenced before the age of twenty-one.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street

TORONTO, JULY 16, 1890.

Original Communications.

EXPECTORANTS.

BY JOHN L. DAVISON, B.A., M.D., C.M., M.R.C.S. ENG.

Professor of Materia Medica and Therapeutics in Trinity Medical College; Physician to the Toronto General Hospital.

Read before the Ontario Medical Association.

The small amount of literature on the subject of expectorants is, I think, remarkable. If the gentlemen who have been named to take part in the discussion to follow have experienced as much difficulty in finding anything definite, practical, and scientific in connection with the subject as I have, outside the ordinary run of text books I can sympathize with them. Even the text-books, afford us but meagre information regarding the mode of action and therapeutical indications of this great and important class of remedies. Whitla dismisses them with about a dozen lines; Nothnagel and Rossbach, Bartholow, Ringer, Waring and Potter, do not discuss them at all. Wood gives a few lines, but they all simply state facts, and are unsatisfactory in not giving reasons. Fothergill deals with them more at length, but in rather a loose and discursive manner: while Lander Brunton, as in every other subject connected with pharmacology upon which he has written, is *facile princeps*, so far as the authors I have had the privilege of consulting are concerned. There is even a greater dearth in the transient current medical literature of the day. I have for some months watched closely the leading medical journals of this continent and of Great Britain, some 200 in number, without finding a single article on the subject. Articles by the score, nay by the hundred, are to be found upon the most recondite subjects connected with medicine and surgery, articles which to, perhaps, 9 out of 10 average medical men are impractical to a degree, but not one article, I assert, have I seen on the subject of expectorants.

It is for this reason that I have thought a consideration of some of the scientific aspects of this very important branch of therapeutics will be both profitable and interesting, and I hope that the discussion which is to follow may elicit from gentlemen present, of large experience, much that may be useful to all of us. For while the vast majority of us, and especially those on the physician's side, will in all probability never be called upon to remove the uterus and its appendages, to perform a resection of the stomach, to trephine for epilepsy, or excise a portion of tuberculous lung, we all every day have to exercise a knowledge of this group of medicines; and while our successes, if we have any, in wielding the instruments in our hands may not be so apparent as those of, say, the laparotomist, the results of our failing to use our instruments—*i. e.*, our drugs, properly, may not be less lamentable than those of the unskilful use of the knife, albeit we shed no blood, in the literal sense of the term; nor do we capture any trophies in the way of tumors or ovaries, or any of the pathological specimens which so much redound to the surgeon's

art. For it may be possible that as many persons are gathered to their fathers each year by careless, routine and unscientific prescribing, as by cancer of the stomach, or even, I believe, intraligamentous cystoma.

What would be said of the surgeon who used his instruments of precision in so careless, unskilful or unscientific a manner as to actually cause the death of the patient he was pretending to heal? And yet he would not be more culpable than is the physician who, either from carelessness or ignorance, orders a routine prescription, with, say, large quantities of opium to break up the cough, for a young woman, with perhaps a latent, perhaps a recently acquired, pulmonary trouble. In the former case the fault of the medical attendant may often be easily noted; but inasmuch as the instruments of the physician, which should be, and would be, if our science were truly a science, instruments of precision, work in the dark, the fault of the prescriber is not brought to the light. And I am firmly of the opinion, moreover, that if the damage done by weak, ignorant and harmful prescribing were as patent, and were at the same time actionable at law in the same manner as is imperfect surgery, such as badly treated fractures, unreduced dislocations, etc., then we should have fewer shot-gun prescriptions, in which there is a hope that the game may be brought down by one of the many agents used as a matter of routine.

Let anyone examine a hundred or a thousand formulas for cough mixtures, which he may see, not in chemists' shops, where they are private property, but in medical journals, and he will discover most unequivocal evidence of the compounding of medicines without a proper knowledge of their actions, of gross ignorance as to the pathological conditions present, and a total disregard of them. Thus he will find side by side in the same prescription vin. ipecac and ammon. carb.; vin. antimoniale and senega, alkalies and squill; pot. iodid. and the balsams, jaborandi and syrups, and many others which I need not mention, which are, as these are, diametrically opposed to each other in their action on the bronchial mucus membrane, and should not therefore be compounded except under the most peculiar and almost unimaginable circumstances. It is not given to us to prescribe expectorants at the present day at any rate, by inspiration, neither can we truly say of a physician that he

> "By long experience may attain
> To something like prophetic strain."

Empiricism reigns, under the most favorable circumstances, over a large number of subjects in the domain of medicine, and while our knowledge of expectorants is to a considerable degree empirical, we have enough scientific data to go upon, were we careful in each case presented to us to use them, to enable us to prescribe the known remedies rationally, not only to the great benefit of our patients, but to the advancement and credit of our profession. I must ask you to allow these considerations to be my apology for bringing before your notice this subject, with which the majority of you are from experience more capable of dealing than I am.

Expectorants may be defined as remedies which facilitate the removal of secretions from the respiratory tract. This they may accomplish in several ways, of which the following are the most important:

1. By altering the nature of the secretions either in the act of their elimination, or acting systemically, in a manner not explained, making it thinner and more easy of expulsion.

2. By increasing the flow from the congested and turgid mucous membrane, through their effects upon the vessels.

3. By mechanically dislodging it in the act of vomiting.

To these may be added remedies which relieve spasm of the bronchial tubes, as in asthma; those which soothe the irritable respiratory centre; and those which act reflexly through the nerves of the mouth. These latter three classes, while hardly coming under the definition, may be regarded as true expectorants, inasmuch as they are indicated by the pathological conditions for which expectorants are used, viz., the relief of cough, the relief of dyspnœa, and the removal from the respiratory tract of certain morbid products of disease which are inimical and injurious to the economy of the system.

And as I shall not refer to the apparently mechanical action of certain substances held in the mouth in the promotion of the expulsion of bronchial secretion, I may note in passing

the well known fact, that a small piece of gum acacia, gelatine, preparation of potash, etc., or even a glass bead, a button or any other perfectly tasteless substance held in the mouth, will favor expectoration, especially when the bronchial secretion is viscid and tough. I said these agents act in an apparently mechanical manner, as is proved by the fact that a glass bead will have a similar, though not so powerful, effect, to that of a piece of sal ammoniac. No doubt they act reflexly; the impression being produced upon the terminal branches of the glosso-pharyngeal, or the lingual branch of the fifth nerve, carried to the medulla, and hence either through the branches of the vagus or through the sympathetic system to the bronchial mucous membrane, in which it may affect secretory or nutritive changes, or more probably both. As such nerve stimulation is supposed to increase the action of the cilia, thereby sweeping up the tough viscid mucus to the back of the pharynx or top of the larynx, whence it may be easily expelled, such remedies have been termed ciliary excitants.

They are constantly used in the form of compressed tablets, made by various firms of manufacturing chemists, and it is worthy of remembrance that they do not act by absorption, though sapid substances are more useful than tasteless ones, for the reason that they produce a more powerful impression upon the nerves of the tongue and mouth, and hence reflexly act more powerfully upon the cilia of the bronchial mucous membrane.

To revert to the others, which I have said do not really rank as expectorants under the definition, as time will not permit me to dwell upon the class of anti-spasmodics, such as lobelia, stramonium, opium, etc., but I may mention a few points in regard to those which soothe the irritable respiratory centre or the nerves connected with it, *i.e.*, pulmonary sedatives, such as morphia, chloral, hydrocyanic acid, hyoscyamus, etc. Of these the chief is morphia or opium. It has a double action, viz., that of lessening excitability of the respiratory centre and of diminishing the bronchial secretion; in both ways, as will be readily understood, relieving the cough. I think there can be no doubt that opium in one of its preparations, most frequently the ubiquitous paregoric, is given far too frequently in cases of respiratory troubles, as an easy means of burking the cough, if I may be allowed the expression, and letting nature do the rest; the cough being to the patient the *fons et origo malis*. This plan of treatment is surely most injudicious, and may be responsible for much of the chronic disease of the lungs we see on every hand. In many, indeed in most cases, the *vis medicatrix naturæ* is competent to restore the pulmonary tissue to a condition of health, in spite of the bungling attempts of man, which, intended to aid nature, really hinder her.

That opium has a decidedly useful and important *rôle* to play in the treatment of chest affections is certain, but it is equally certain that its routine and indiscriminate use, simply to get rid of the cough, is quite as silly and quite as harmful as is the use of Mrs. Winslow's Soothing Syrup, or any of the baby comforts that are on the market, by mothers, who, either in ignorance, or regarding their own comfort more than the welfare of their offspring, soothe the symptoms of the disease by plying these narcotics. Verily they sow the wind to reap the whirlwind.

The indications for the use of opium in pulmonary troubles are not many. I have endeavored to group the chief ones, which may be briefly stated as follows: first, in those cases in which we have to deal with fits of coughing, when the exciting cause will not admit of expulsion. Here the futile attempts at expulsion and imperfect respiration produce great exhaustion, and may require the aid of an anodyne, of which the most powerful is opium. Congestion or consolidation of the lung tissue; calcareous nodules found embedded in the lung; and aortic aneurism would be examples of such conditions. Again, there may be much cough with little or no expectoration. The lining membrane of the air tubes is irritable and "raw," there is no increased secretion, and yet the cough will be pretty continuous and very distressing, but quite useless. The congestion is great, requiring decided medication with some of the depressant expectorants, and at the same time the futile, wearing, exhausting cough, will be best allayed by opium in some of its forms. Again, when secretion has become too copious, either from the administration of the depressant expectorants or in the natural course of the disease, opium may be used, not so much to

lessen secretion or to allay the troublesome cough, for while it does tend to check the secretion, we have other and more powerful and more safe agents for this purpose in the terebinthinates and balsams. Lastly, I may mention, that the persistent dry, hacking cough, so characteristic of the presence of tubercle, and where the irritation of the terminal ends of the pulmonary nerve fibrils is ever present, may be treated with morphia, to the great relief of the patient. But to be efficient the drug must be given constantly, and of course in constantly increasing doses ; and so it becomes harmful by destroying the appetite, and locking up the secretions, thus producing constipation, with all its attendant train of evils. Its evil effects in such cases may be minimized by combining it with vegetable bitters, and laxatives. These are all the important indications, I think, for the use of opium in pulmonary troubles, except perhaps one to which I shall advert later. You will notice that, though important, they are very few.

The contra-indications are legion, and I need not attempt even to enumerate them much less discuss them. I might perhaps just mention a point which cannot be repeated too frequently, though no doubt familiar to all of you, and that is that when large quantities of mucus are being secreted, and especially in children, opiates should be used with exceeding care, for fear of benumbing the nerve centres or nerves connected with them, thereby increasing the danger of an accumulation of mucus in the lungs, and a consequent drowning of the patient in his own secretions. Remember that opiates do not cure, they simply alleviate, and that you are "between the devil and the deep sea" when using them. They certainly do tend to check undue secretion, but a much more excellent remedy, in cases where secretion is too profuse, is *atropine.* This agent is very efficient in arresting the secretion of the bronchial glands. It is much more powerful than opium, or indeed any or all of the stimulating expectorants. It does not prevent cough, being a stimulant to the respiratory centre, and in this respect may tend to increase cough—an objection we shall speak of later. This remedy is not perhaps as frequently prescribed along with opium as it should be, and this is the other indication for the use of opium to which I said I would advert. They do not destroy each other's action ; thus the one produces a comparative dryness of the mucous membrane, while the other diminishes the irritability of the centre for coughing. Such a combination would then be useful in cases of catarrh, emphysema, and phthisis, where there is a free secretion of mucus. If there be a cavity in the lung upon which the profuse expectoration depends, it will not be so efficacious. This remedy, atropine, is especially useful in the cough and expectoration of phthisis, owing to its almost certain effect in checking the exhausting sweating of that disease. Though this is hardly the place to discuss the etiology of the night sweats of phthisis, if you will bear with me I shall interject a theory which seems natural as to the causation of this phenomenon, connected closely, as it is, with the cough of the disease, and therefore not perhaps too far afield in a consideration of expectorants.

In a condition of health the respiratory centre responds very promptly to any undue venosity of the blood. Being stimulated by the CO_2 of the venous blood, messages are sent to the muscles of inspiration, respiration is acclerated and the blood purged of the excess of CO_2 before enough has accumulated there to stimulate the sweat centres, so that undue sweating does not obtain. But in phthisis, the respiratory centre is worn out and greatly depressed, both by the cough during the day and by the natural depression which occurs during sleep; it does not respond so readily to the stimulation of venous blood, and in consequence the amount of CO_2 in the blood, may accumulate to such an extent that the sweat centres are stimulated before the respiratory centre responds to arterialize the blood, and thus are produced the profuse sweats which, may be noted, are so depressing to the patient. Now stimulate the respiratory centre and you will have placed it in such a condition that it will be able to respond to the action of venous blood; CO_2 will not accumulate, because respiration is nearly normal, and the sweat centres, lacking the influence of the CO_2 to stimulate them, remain quiescent, and the night sweats are obviated. It will be seen that the remedies of most repute in the night sweats of phthisis are precisely those which have been shown by pharmacologists to be stimulants of the respira-

tory centre, thus upholding the theory as given above. Among such remedies may be mentioned nux vomica, strychnia, atropia, hyoscyamus, Dover's powder, ipecacuanha, picrotoxine, zinc salts, and pilocarpine. Of these the most potent and the most reliable is probably atropine, which Fothergill says may have to be pushed to $\frac{1}{25}$ of a grain, though I have seen what were to the patient and friends alarming symptoms from $\frac{1}{60}$ grain of the drug.

The one drawback to these remedies, useful as they undoubtedly are in restraining the sweating, is that they sometimes leave the respiratory centre so sensitive, that the cough next day is greatly aggravated, so that what we gain in one direction, we lose in another. This may be partially obviated by combining the antihydrotic with opium, which use of that drug, you will observe has been already mentioned as one of the few indications.

If now we divide expectorants into two great classes, viz.: 1st, depressant expectorants, or those which depress the heart, lower the blood pressure and *increase* secretion; and 2nd, stimulating expectorants, which increase the action of the heart, raise blood pressure, and *diminish* secretion, we shall have a basis for the treatment of many of the pulmonary troubles we are called upon to relieve. In the first class we shall have the preparations of antimony, ipecac, lobelia, jaborandi, apomorphine, pot. iodide and the alkalies generally. In the second we shall have the salts of ammonium, nux vomica and its preparations, senega, squill, the balsams, the turpentines and their derivatives, sulphur, saccharine substances, and the acids.

Take now the condition of the mucous membrane in the first stage of bronchitis. What is its condition? It is congested, swollen, turgid and dry; and though the circulation, whether arterial or passive, may be greatly increased in the part, secretion is not up to the normal, the mucus is scanty and tenacious, the cough is ineffectual to dislodge the viscid phlegm, and may be very exhausting. What are the indications? To give stimulating expectorants, as ammonia or senega? No, but on the contrary, we should prescribe the nauseating or depressing expectorants, as ipecac, pot. iodide or some of the antimonial preparations, till the circulation is relieved, the skin becomes moist, and the bronchial secretion is again established. This would be rational treatment: but how often would we find given to a patient in the condition I have described a mixture containing ammon. mur., ammon. carb., squill, the everlasting paregoric, with one of the balsams and syrup? You may not agree with me that anyone would give all stimulating expectorants, as would be the case in the mixture I have supposed; but I am certain that it is often done, regardless of the stage at which the patient is seen. So that your physician, instead of using his instruments of precision to the good of the sufferer, adds fuel to the fire, burking the cough with opium, and allows nature to heal, if fortunately she is able, not only the original lesion, but the one which has been aggravated by his careless, unscientific and routine prescribing. Milner Fothergill says, "Whatever the amount of pains required to procure relief, whether by expectorants sufficient in dose and sufficiently long continued; whether they have to be aided by producing an eruption on the chest by tartar-emetic ointment, or croton oil liniment; whether even by venesection; the first stage must be got over before the stimulating expectorants are of any avail." And then he goes on to relate the case of a patient, who went from one London hospital to another, and got the routine ammonia and paregoric mixture, till he at length got relief by some sensible man, I think Fothergill himself, though his modesty did not permit him to say so, giving him some tartar emetic, ipecac and acetate of ammonia for a few days, when he says "carbonate of ammonia and senega did him great good."

The effect of the lessening of the congestion of the mucous membrane is well seen in the stopping of an irritating cough by the patient's going out into the cold air, which lessens the calibre of the engorged vessels with which it comes into contact in the function of respiration, and thus lessens the irritation, and checks the cough, which however will be renewed as soon as the warm air of a room is allowed to enter the chest. This is an anomalous thing to patients, and I have heard them express wonder that they should cough in a warm dry air, when they did not out of doors. The reason is plain, and should teach us a lesson in rational therapeutics.

Time would fail me to speak of the adjuncts which may be useful in this stage, such as poultices, vapors, inhalations, respirators, liniments, plasters, cathartics, etc.

When the first stage is past and secretion is free, then, and not till then, will your ammonia and squill and their congeners do good. And just here I would like to mention that I have found much benefit from the administration of digitalis in congestion, not only in that of cardiac origin, where it is strongly indicated, but also in that of the first stage of bronchitis. It seems to give the patient relief both by strengthening the heart and contracting the vessels of the lungs.

I have mentioned, only to condemn, the practice of suppressing the cough in all cases. Is not a cough often salutary? Is it not nature's method of throwing off some foreign or injurious substance, whether it be dust which has been inhaled; mucus which has been secreted, and is lying on the surface of the mucus membrane, leading to irritation, hidden or purulent matter lying away in a cavity? Should we always check a diarrhœa, irrespective of its cause? Is it not often salutary? Yet some incline to burking it, whether it be uræmic or bilious, or the result of irritating ingesta or undigested food. Few of us would like to admit such careless or unscientific practice, and yet the great Milner Fothergill owns up to having killed his first patient, who had Bright's disease, by foolishly, but with the best intention in the world, checking her diarrhœa. So with cough. It is, in perhaps a great majority of cases, salutary, and should not therefore be stamped out, but judiciously controlled and even sometimes sustained; and when we shall have done that, without, to any harmful extent, interfering with the other functions of the body, we shall have done our part as physicians, acting as the handmaidens of nature, stepping in where she, in her attempts at healing a breach, goes, as she often does, too far. I had intended making some notes on the reflex action of certain agents, as cold and heat, blisters, etc., applied to the surface of the body, on the pulmonic circulation; but interesting as such considerations would be, I shall be obliged, for want of time, to conclude this paper by referring briefly to the pathology of cough, and to some kinds of cough which I have not already spoken of. I do this because, in a sense, cough lies behind and is at the root of all that is practical in our treatment of pulmonary troubles by expectorants. Cough is, as I have said, nature's method of ridding the system of some foreign body or relieving dyspnœa; or is the result of irritation of some part of the body, whether in the respiratory tract or not, which is more or less closely connected by the nervous system, with the respiratory centre, upon the undue irritation of which cough a modified form of respiration depends.

I need not recapitulate as to the cough of congestion, nor of phthisis, or pleuritis, but pass on to consider other forms. And first as to pharyngeal cough. Here there is irritation of a part where the nerves are chiefly expiratory; hence we have a cough which is loud, explosive, prolonged and barking; and inasmuch as here the digestive and respiratory tracts cross one another, it is frequently accompanied by retching and vomiting.

This irritation of the pharyngeal tract, supplied by the glosso-pharyngeal, sometimes acts as an adjunct in the setting up of a cough, by aiding the irritation of the respiratory tract, which may not have been in itself sufficient to cause cough. Thus certain persons with an elongated uvula cough as soon as they lie on their backs because, the uvula falling back upon the pharynx or pillars of the fauces, adds its irritation to that of the respiratory passages, and their combined action is sufficient to cause cough, which, when the sufferer turns upon the side and thus lifts the uvula off the region of the glosso-pharyngeal, ceases. In this form of cough, in addition to the remedies given to allay the bronchial or other more remote irritation, mucilaginous substances, as jujubes, linseed tea, marsh mallow, etc., are very useful in forming a protection to the irritable mucous membrane of the pharynx from dust, cold air, etc.

Regarding the quality of any cough, it is worthy of note that when the irritation giving rise to it is upon a part of the tract where the nerves are expiratory, then we have a loud, explosive, prolonged, barking cough, as the pharynx, larynx, trachea and large bronchi; while cough due to irritation of those parts which have nerves, chiefly inspiratory, is short and hacking, as the lungs and costal pleura.

As to stomach cough, irritation of the nerves of the stomach, the respiratory tract being healthy, will not produce cough, but if the larynx and trachea are already in an unhealthy and irritable condition, then the irritation of the stomach may be sufficient to set up a cough. Thus in certain forms of dyspepsia, accompanied at a certain period after meals, or before meals, by a cough, which is liable to be accompanied by retching or by simple regurgitation of portions of the partially digested food, the stomach is at fault, as are also the larynx and trachea. So in the morning cough of drunkards. Here, from continuous stimulation, the mucus membrane of the stomach is in a state of chronic inflammation. It pours out large quantities of mucus, which accumulates during the hours of sleep. When the individual awakes the respiratory centre is more active; the irritation of the stomach by the mucus, and its inflamed condition, added to a probable irritable condition of the respiratory tract, succeed in bringing about long convulsive fits of coughing. The toper on his way for his morning dram may be seen to lean against a post or grasp at railings to support himself during this paroxysm. He succeeds after a time in bringing up, partly by coughing, from the bronchial tubes, and partly by vomiting, from the stomach, a quantity of mucus, when he wipes his suffused and reddened eyes, and passes on relieved. Here the treatment should be mainly directed to the catarrhal condition of the stomach, which wants toning up with vegetable bitters and strychnia, as well as sedating with bismuth and soda. The interdiction of alcoholic beverages, where the trouble originates in their use, is of course necessary, with what results will depend upon how far your patient will submit to follow your injunction. Other varieties of cough, such as ear, tooth, nose, liver and spleen cough, are of interest, chiefly as showing how a stimulant may be conveyed from parts of the body not functionally connected with the respiratory tract, and being registered by the respiratory centre, produce cough. The indications for their treatment are obvious.

DR. PAVY, who recently retired from the office of Senior Physician at Guy's Hospital, has been presented with a handsome piece of silver plate, the gift of students of the hospital.

THE ETIOLOGY OF PUERPERAL FEVER AND THE METHOD OF PREVENTING THIS DREAD CONDITION.

BY J. ALGERNON TEMPLE, M.D., M.R.C.S.,

Being a portion of the Presidential Address at the Meeting of the Ontario Medical Association.

(Continued from page 317.)

Time will not allow me to enter into the subject as fully as its importance demands, and you must pardon me if I am particularly brief.

We are all general practitioners. We all have to do with midwifery and have all experienced the anxiety caused by cases of obstetrics, especially by those complicated with puerperal fever. It is time this rather vague name was dropped, and one more definite adopted. The term "puerperal infection," as suggested by Dr. Garrigues, appears to me to be very suitable. Firstly, then, what is the nature of the febrile and inflammatory processes that frequently follow child-birth? And, secondly, are these changes due to some morbid condition generated within the woman's system, or do they come from without? If they come from within, why is not every woman similarly affected? If they come from without, what is the nature of the virus? Where does it come from, and how best can it be prevented? These are questions I have frequently put to myself, and often, indeed, have I found them difficult to answer.

Firstly, I do not believe that the so-called puerperal fever is a specific disease, peculiar to the lying-in condition, but that it is identical in every way with surgical septicæmia, or pyæmia, due to the activity and development in the system of micro-organisms, which, when introduced under favorable conditions, produce the symptoms of child-bed fever. These micro-organisms, being once in the woman's body, so overwhelm the system by their rapid development as to produce death. No pathological changes have ever been discovered in puerperal fever differing from septicæmia in general, except in situation. Different women are affected in different ways. According to Pasteur, the innocuous micrococci that live in the vagina become dangerous if they are developed in great numbers, and the different symptoms are to be explained by the different organs to which these microbes are carried. Some go to a gland, become arrested,

form an abscess and are evacuated. Some find their way into the general peritoneal cavity and from thence into the general system. Another explanation of the difference in the symptoms is the greater power of resistance of one constitution than another. That the symptoms are, in the majority of cases, due to the introduction from without of some poison is, I think, demonstrated clinically by the fact that since the introduction of antiseptics into midwifery, we have much less of puerperal fever and its fearful results. Undoubtedly the retention in the uterus of clots, pieces of membrane, or placenta, forms a starting point in many cases. But, on the other hand, look at the bruised, perhaps torn, vagina, where we have a properly prepared ground for the reception and development of these dangerous organisms, especially so in the primipara.

Bacteriologists deny to-day that the woman herself can produce the poison. The germs must be brought from without to cause putrefaction and infection. We know of the existence of microbes in the vagina of a healthy woman. They, however, do her no harm, because the vagina and cervix are protected by their epithelium, and they cannot enter into her system. But when this protective covering is destroyed, they find an entrance and may produce all the train of symptoms. If this is the case, it is our duty to prevent by every means in our power *the introducion* or development of these microbes. The altered condition of the patient's blood during pregnancy, the general plethoric condition, the increase of the colourless elements and decrease of the blood corpuscles, the increase of the leucocytes and surplus of fibrine, are strong predisposing causes to inflammatory diseases.

This poison may be brought from patients similarly affected, from decaying vegetable matter, from some of the zymotic diseases, from a dung-hill, cess-pool, sewer, or from stagnant water. Dr. Goodell has lately suggested, as a possible source of the poison, an imperfect closet, in which the patient may have sat during labor for the purpose of evacuating the bladder or bowels, and he very properly warns us against this danger. The poison may be brought to the patient by the hands or instruments of the doctor, midwife, or nurse ; by a sponge or dirty soiled rag used to protect the bed. It will cling to our fingers under the nails, and on making the necessary vaginal examinations we introduce and deposit it in the vaginal canal, from whence it becomes rapidly absorbed.

I do not believe in the air being a medium by which the poison is carried from patient to patient. I do admit that the air in a badly drained and ventilated house, or over-crowded lying-in hospital, may become the medium ; but it is because of the unsanitary condition of that particular place that the air may become so loaded with the virus as to readily infect those breathing and living in it. In speaking of the air as a medium, I allude to the air outside our dwellings, and my contention is, I think, proved by the fact that of two physicians living and practising in the same locality, one may have the disease among his patients, while the other has not. The one carries the poison through the medium of his hands from patient to patient, because he fails to observe the strict rule of antiseptics. The other is scrupulously careful, and he has no cases. A living ferment, once introduced into the system, is capable of reproduction, providing the proper conditions for its development are present.

After this brief review of the nature of the disease, it remains for us to see how we can best prevent its onset and spread.

Firstly, then, before making any vaginal examination, the physician should thoroughly wash and disinfect his hands in hot water and soap, with some disinfectant in it, carefully cleaning his nails. He should also be provided with some such lubricant, as carbolized vaseline. He should have prepared a solution of perchloride of mercury, of the strength of 1 to 2,000, in which, before and after he has made an examination, he should immerse his hands, first washing them with soap and water. He is then ready for his next examination. My own plan is as follows : On entering the patient's room, and previous to examination, I thoroughly wash and cleanse my hands and nails in simple hot water and soap. I then dry them and immerse them in the perchloride solution, which I have previously prepared. I next anoint my fingers with carbolized vaseline, and make the examination. After its completion, I again wash my hands in plain hot water and soap, and again immerse them in the mercuric solution. I may say that I never

depart from this procedure when attending a case of labor. I am also particular that the nurse should be equally careful about herself. I absolutely forbid her ever to use a sponge, or a soiled piece of linen or rag. I am aware that many practitioners advise the use of an antiseptic vaginal douche before delivery. I am not in the habit of doing so. They do it for the purpose of removing those microbes which are normally found in the vaginal mucus, so as to prevent their possible entrance into the system through rents and abrasions of the vagina.

After delivery, every portion of placenta, membrane, or clots, should be entirely removed and firm uterine contraction secured. A careful inspection of the vulva for lacerations should then be made, and if any exist, even though small, they should be carefully washed with a weak perchloride solution, and brought closely together with sutures. This point in practice cannot, I think, be too rigidly insisted on; for I feel satisfied that the neglect to repair lacerations is frequently the cause of puerperal infection. By immediate stitching we secure primary union in the large majority of cases, and we seal up those open-mouthed vessels that so rapidly absorb all poison brought in contact with them. I also wash out the uterine cavity with a 1 to 5000 solution of mercury, when for any reason I have had to introduce my hand within it. The after-treatment consists in the use of disinfectant douches every four hours, for just as many days as there seems to be need for them.

I will venture the opinion, in concluding this short monograph, that the physician who scrupulously follows out antiseptic midwifery in all its details, will very rarely indeed have to contend with puerperal infection.

The summary of the whole is this: Firstly—Puerperal fever is a preventible disease in the large majority of cases. Secondly—By strict antiseptic precautions the spread of the disease may be prevented. Thirdly—I believe it to be reasonably safe to attend a fresh case of confinement even when we have a case of puerperal septicæmia under treatment, provided before going to the bedside we change all our clothing, and thoroughly wash and disinfect our hands and instruments in a solution of perchloride of mercury. Fourthly—I am of opinion that the most frequent channel of infection is *through rents and abrasions* of the maternal passages, and too much attention cannot be given to secure primary union in all cases of lacerations, even when they are small.

Selections.

CHLORAL HYDRATE, ERGOT, AND NITRIC ACID IN THE TREATMENT OF WHOOPING COUGH.

BY R. STEVENSON THOMSON, M. D., C.M.B. SC.,

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The observations of which the following remarks give a short summary were undertaken about seven years ago, during my residences in the City of Glasgow Fever Hospital, with the object of ascertaining, as far as opportunity offered, the efficacy of these drugs in cutting short the duration of whooping-cough, in reducing the severity and number of the paroxysms, or in favorably modifying the course of the attack in any way whatever.

The notes were made in part by myself, and in part by trained nurses who had been associated with whooping-cough for many years, and were therefore familiar with its different aspects. The patients were kept under observation for eight or ten days without special treatment; the drug to be tried was then administered and continued for two to three weeks, and finally the medicine was stopped, and the patient passed through the last stage of his illness without any treatment of a medicinal kind. The day was divided into two parts, from eight a.m. till eight p.m., and from eight p.m. till eight a.m. Every cough was marked on a card provided for the purpose, and the medicine was given at regular intervals both day and night. When a child had several sharp paroxysms in rapid succession, these were reckoned a single cough. Lastly, as a case progressed, notes of the severity of the paroxysms were made by myself.

Sixty cases were treated with nitric acid, a method of treatment introduced by Amordi, of Montreal, Can. The preparation always used was the dilute acid of the British Pharmacopœia made up with syrup of oranges and largely diluted with water.

A dose of this mixture, corresponding to twenty minims of the dilute acid, was given every few hours to all children above two years of age for a week after the administration was begun, and thereafter every two hours till the treatment was stopped. Children between one and two years were given half this dose, and younger children a fourth. In none of these sixty cases was I able to convince myself that this agent had the very slightest effect in reducing the number of paroxysms or in shortening the ordinary course of this disease. The severity of the paroxysms was also unaffected. In nearly all the cases treated with nitric acid, as well as in those treated with hydrate of chloral and ergot, a progressive improvement was noticeable, beginning a few days after the admission and continuing till the end of the case. This no doubt was due to the fact that the hospital is situated in the country, so that the children have every advantage of fresh air and the more perfect hygienic surroundings. Improvement under these conditions is evidently the normal course of the uncomplicated disease, and this was neither advanced nor retarded by the nitric acid treatment. One point of importance observed in connection with the administration of this drug was the ruddy and healthy appearance of the children, in this forming a marked contrast to those treated with chloral or ergot.

The death-rate among the patients treated with nitric acid was high, being a fraction over twenty-three per cent. Seven per cent. of the deaths occured among children under twelve months, while the ages of the others ranged from one year to five. The immediate cause of death among the younger children was convulsions, while the older ones were mostly carried off by catarrhal pneumonia. Of course, when complications such as these occurred they were treated on their own merits.

The use of ergot in the treatment of whooping-cough was first recommended by Dr. Hampel (*Practitioner*, vol. i. 263). This drug, in the form of the liquid extract (British Pharmacopœia), was administered to forty-nine children in doses of ten mimins every four hours when the patient was under two years of age, and when the child was older than this in doses of twenty mimins at the same intervals. Of the cases thus treated, a little over sixteen per cent. died, two of the deaths occurring in the children under twelve months. As in the case of the nitric acid treatment, it was impossible to convince myself that the ergot had any beneficial influence on the disease; the cause, number, and severity of the paroxysms were quite uninfluenced by the medicine.

During the past twenty years chloral hydrate has been more or less extensively used in the treatment of whooping-cough, and, judging from the literature, with greater success than most other drugs which have been advocated at various times. Ninety-five children were treated with chloral hydrate, and of these sixteen per cent. died. It is of importance to note in this connection that only one child died from convulsions, a fact of consequence when we consider the number of children that die from convulsions following on whooping-cough. As in the case of the other drugs tried, chloral hydrate seemed to have no special influence on the course of the disease. The steady improvement which was noted from the first in nearly all the cases being uninfluenced as far as the number of paroxysms was concerned, yet it was easy to satisfy one's self that though the number of the attacks was not dimished, their violence was very greatly reduced, and, in addition, I am inclined to think that the tendency to convulsions was greatly diminished. The usual dose for children over two years was five grains every four hours, and half that quantity to children under two years. The children seemed to stand this pretty free and continuous exhibition of chloral very well, yet it is better to avoid it when there is a tendency to vascular depression.

To sum up: None of these drugs is a *specific* for whooping-cough. Ergot is absolutely useless. Nitric acid is of no use as a specific, but its well-known tonic action makes it a useful drug when combined with the other means usually employed to improve the health of children suffering from whooping-cough. Chloral hydrate is of considerable service in so far as it mitigates the violence of the paroxysmal cough and diminishes the tendency to convulsions, but it has no influence on the number of paroxysms, nor does it shorten the attack.—*Archives of Pediatrics.*

ANTIPYRIN AND ITS INCOMPATIBLES.—Messrs. E. J. Millard and A. Campbell Stark give the following list of incompatibles as determined by their experiments :—

Acid. carbolic., precipitated in strong solution.

Acid. hydrocyan. dil., yellow coloration.

Acid. nitric. dil., faint yellow coloration.

Acid. tannic., white, insoluble precipitate.

Alumen (ammonia), deep yellow coloration, fading and precipitating.

Amyl nitrite (acid), green coloration.

Arsen. iodid., precipitate.

Chloral hydras, precipitates in strong solution ; no apparent action in dilute.

Cupri sulphas, solution turns green.

Decoc. cinchonæ, precipitates.

Ext. cinchon, liq., precipitates.

Ferri sulph., brownish-yellow color, deposits on standing, and solution turns red.

Glycerinum acidi carbolici, precipitates.

Glycerinum acidi tannici, precipitates.

Hydrarg. perchlor., precipitates, soluble in excess of water.

Inf. catechu conc., precipitates

Inf. cinch. acid., "

Inf. rosæ acid., "

Inf. uvæ ursi., "

Liquor arsenii et hydrarg. iod., precipitates.

Liquor ferri perchlor., blood-red coloration.

Liquor ferri pernit. " "

Liquor ferri persulph., " "

Liquor potass. permang., reduction takes place quickly.

Sodii salicylas (solid), liquefies.

Spirit. ærtheris nitrosi (acid), green coloration.

Syrup. ferri iodid., reddish-brown "

Tinct. catechu, precipitates.

Tinct. cinchonæ, "

Tinct. cinchon. co., "

Tinct. ferri perchlor., red coloration.

Tinct. gallæ, precipitates.

Tinct. gum. rubri (Eucalyptus kino), precipitates.

Tinct. hamamelidis, precipitates.

Tinct. iodi., precipitates, soluable in excess of water.

Tinct. kino, precipitates.

Tinct. laricis, "

Tinct. rhei, "

Dilute Acids.—With dilute acids no apparent change takes place, as with sulphuric, hydrochloric, nitric, and phosphoric acids, antipyrin forms soluble compounds (Gay and Fortuné).

Nitrites and Nitrous Acid.—The green coloration sometimes produced when antipyrin is mixed with spirit of nitrous ether, is due to the formation of the compound isonitroso-antipyrin, that is, antipyrin having an atom of hydrogen replaced by N O. By the action of the acids upon this body, a small quantity of cyanogen is produced, and it is stated that unpleasant symptoms have been traced to a mixture of antipyrin and spirit of nitrous ether. According to reporters, the compound itself is inert, and the cyanogen formed from it, by the acids of the stomach, is produced in too small a quantity to be dangerous. Isonitroso-antipyrin is only formed in the presence of free nitrous acid ; a neutral spirit of nitrous ether may therefore be safely dispensed with antipyrin. But it should be remembered that the ethyl nitrite is itself speedily decomposed by water, with the formation of free nitrous acid. We would therefore recommend that the occasional practice of prescribing the two together should be discontinued. The same remarks apply to commercial amyl nitrite.

Tinctures.—We found that no precipitation in any case took place with tinctures if spirituous solution of antipyrin was employed, or if the salt was added to the tincture. The addition of water precipitated the antipyrin compound. In connection with the precipitation with astringent preparations, it should be borne in mind that antipyrin behaves with reagents exactly as an alkaloid, and is therefore precipitated by tannic acid and its congeners. The same observation applies to the astringent decoctions and infusions.

Chloral Hydrate.—The fact that chloral hydrate and antipyrin react with each other was pointed out some time ago. From a number of experiments we are of opinion that this compound of antipyrin and chloral is not appreciably formed unless concentrated solutions are employed. We conclude that the reaction is not complete in aqueous solutions, and does not appreciably take place if dilute solutions of the two bodies be employed. As the chloral-antipyrin is, according to Herr Reuter, physiologically inert, the question of its formation under the ordinary conditions likely to occur in pharmacy appears to us to be of some importance.

Sodium Salicylate.—The fact that sodium salicylate and antipyrin react when in powder has been several times pointed out. No reaction appears to take place in solution.—*American Druggist.*

TWO CASES OF VULVO-VAGINITIS COMPLICATED BY ARTHRITIS IN YOUNG GIRLS.—Dr. Henry Koplik has reported the cases and reviewed recent literature bearing upon the subject. The case was in a child aged five years, who had been suffering two weeks from muco-purulent discharge from the vulva. It was found to contain gonococci. The patient complained of some uneasiness in the præcordial region, pain in the right shoulder and wrist, and three days before it had complained of pain in the right knee. On coming under observation the child was found ill-nourished, anæmic, the right shoulder very painful, no swelling nor rise of temperature. The right wrist was also painful. The knee was painful and swollen; the touch indicated a rise of temperature; there was an effusion into the joint; the patient walked with the greatest difficulty. There was a thick greenish-yellow, vulvo-vaginal discharge. Temperature 102° F. per rectum. The heart was negative. The swelling of the knee somewhat subsided under treatment and rest, the discharge continued, and the patient passed from under observation. The second case was in a child three years and a half old. Her guardian noticed a discharge from the vulva, loss of appetite, redness, swelling, and pain in the right ankle. There was no history of traumatism. Examination showed a muco-purulent discharge upon the vulva, the right ankle swollen and red, some rise in the temperature at the joint, no signs of fluid, manipulation very painful. Under treatment the redness and the pain in the joint decreased, but the discharge from the vulva remained, and later the acute affection of the joint passed off. There was some relaxation of the ligaments of the ankle-joints, but not sufficient to interfere much with function, although a reinforcing shoe was worn. The joint so far improved that one would not have believed it had been affected, but through some neglect the child got a blennorrhœa, and was sent to an eye infirmary, where he lost sight of the case. Gonococci were found in the mucus and pus on the vulva. The author avoided as much as possible the use of the term gonorrhœal rheumatism. He believed the arthritis might complicate other severe suppuration, and cited the case of an infant at the breast. Unlike in adults, the minor joint-affections in children passed off within a reasonable time. The cases were not to be explained by the circulation of the gonococcus in the blood.—*Archives of Pediatrics.*

ANTISEPTIC SYRINGING.—By Arthur Neve, F.R.C.S. Eng. Syringing is frequently employed to diminish the septicity of a suppurating cavity or sinus. To obtain the full action of an antiseptic, it is desired to bring it into contact with every part of the wall. Hyper-distension has been frequently recommended as the only way of accomplishing this purpose. It is, indeed, a difficult task to syringe effectually a tortuous sinus with numerous pockets and branches. Yet we ought to be aware of hyper-distension. At comparatively low pressure fluid will dissect its way along the plane of muscles or under aponeuroses. In this way less pressure than is needed to reach the furthest ramifications of a sinus may open up fresh areas of healthy tissue. By careless syringing I have seen the extent of a sinus much enlarged. Above all is it likely to do damage among the recent adhesions of an operation wound. In short, if there is not provision for the fluid to escape freely at the moment of syringing, the surgeon must bear in mind the capacity of the cavity or sinus; and remember that if this is exceeded the whole force will practically be exerted against the weakest part of the wall, and that suppuration will follow along the new track opened up by forcible syringing.—*Lancet.*

A PLEA FOR THE GENERAL ADOPTION OF THE TRACTION FORCEPS.—Dr. Joseph Hoffman, Philadelphia, Pa., read a paper with this title, before the section in obstetrics and gynæcology, at the recent meeting of the American Medical Association. He said: "The forceps had a strictly logical indication, not as a means of saving the physician's time or because the patient desired its use. Dilatation being

tardy or imperfect, the forceps was indicated, and was a conservative agent both for mother and child. Too often the forceps was used as a lever or tongs, and not for traction alone. In the ordinary forceps certain forces which acted through the fœtal body were lost. If there was malformation of the maternal pelvis, this loss of force was exaggerated. The aim should be to imitate nature and use traction in the axis of the pelvis. When this principle was carried out there was no danger of rupturing the perinæum, as might be supposed, for the traction rods worked nearly in a parallel with the blades of the instrument. The traction forceps might be used for either high or low operations. For the former it was far superior to the ordinary instrument, especially if the pelvis was deformed or the head had the occipito-posterior position. The speaker now used the traction forceps for all cases in which instrumental (*i. e.*, forceps) delivery was indicated. The force was applied at the centre of the fenestræ, and here there was the greatest mechanical advantage."—*New York Medical Journal.*

Death from Tight Lacing.—Happily the practice of tight-lacing, though still a fruitful source of illness, does not now occupy a foremost place among the recognized causes of death. The fact that it does not occasionally stand in this position, however, should be noted by those foolish persons whose false taste and vanity have made them the suffering devotees of a custom so injurious. It should be remembered also that, whatever may be said of the more evident effects, the indirect consequences of thus tightly girding the body cannot be exactly estimated. They cannot but be hurtful. The veriest novice in anatomy understands how by this process almost every important organ is subjected to cramping pressure, its functions interfered with, and its relations to other structures so altered as to render it, even if it were itself competent, a positive source of danger to them. Chief among the disorders thus induced are those which concern the circulation, and it is to the labouring incapacity of a heart thus imprisoned and impeded both as regards the outflow and return of blood that we must attribute such disastrous consequences as occured a few days ago in a Berlin theatre. One of the actresses, who had taken part in an evening performance, and then seemed to be perfectly well, was found next morning dead in bed. Subsequent examination of the body showed that death was due to syncope, and this was attributed to tight-lacing, which the deceased had practised to an extreme degree. As regards the persons immediately affected, the warning conveyed by this incident is obvious.—*Lancet.*

Leprosy in Central Africa.—In one of Mr. Stanley's letters he incidentally refers to a case of mutilating disease having a strong resemblance to leprosy. This was found at a point in his last journey where no white man or Arab had visited before him, so far as he could learn. The diseased person, an aged female, was alone at the time, apparently an outcast and subjected to a quarantine such as might be formed by all the rest of her tribe running away from her. Linguistic difficulties prevented Stanley from getting a satisfactory history of the case, so that the verification of his diagnosis of leprosy must be left to some future explorer of the African Lakes country. The explorations of Captain Lovett Cameron about Lake Tanganyika, nearly due south from the point visited by Stanley, as referred to above, brought out the fact that a leprous tribe was believed to exist on the shores of that lake. It is the belief of the natives that the disease may be contracted by drinking the water of the locality where the afflicted tribe abide. The other natives shun that tribe and will not intermarry with its members; the lepers themselves are forbidden to depart from their district. They are chiefly located upon a high rocky island in the northwesterly part of the lake. Captain Cameron did not himself see these people, but he was informed that the disease produced mutilations of the extremities, the greater number of its subjects having lost a part of a hand or foot, while nearly all had been deprived of the sight of one or both eyes, and it was quite a rarity, he was told, to meet with a person not suffering from blindness in some degree.—*New York Medical Journal.*

FASHIONS AND CUSTOMS OF THE DARK CONTINENT.—There is a sad monotony in our European fashions. Even the so-called changes are often fugues on a trivial theme, or thinly-disguised variations and reproductions of forgotten trivialities. Our new communications and lively interest in the gentle inhabitants of Central Africa may suggest some startling novelties. Besides the graceful extravagances of their head-dress—which, however, hardly beat those of the seventeenth and eighteenth centuries, reconstructed for the public edification a few years since by Mr. Lewis Wingfield, and which may yet live again—there are many varieties among our new African *protégés* of the way they wear their *heads*. The ruling families of the Munbuttu tribe flatten their skulls so as to elongate their heads. The Bari apply pressure just in front of the ears so as to heighten the head in that place. The Beli distinguish themselves by extracting the four front teeth of the lower jaw. Then there is a variety of ways of wearing a tail, which beat the Court train of the modern beauty in simplicity and perhaps in grace. The Madi wear cotton tails, which swing when they dance. Elsewhere a lady limits her costume to a twig arranged as a tail, and manages to seat herself at a court function with this appendage in a graceful and dignified manner without throwing it over her arm, and without the intervention of a chamberlain. In the matter of eating, they are catholic and omnivorous, and nothing comes amiss, from a banana—which furnishes food, and when fermented, drink—to a fat pig or a deceased wife's sister, who give little trouble there to legislators. Owing to their reticence as to their burial customs—for which dark reasons are suggested—it is difficult to pursue this branch of anthropological and osteological research. It will be seen, from the graver gleanings which we publish elsewhere, that there is much to interest the physician and the anthropologist. Dr. Emin Pasha's diary is a mine of dry but instructive reading on this subject.—*(Emin Pasha in Central Africa) British Medical Journal.*

RETROVERSION OF GRAVID UTERUS.—Dr. Halliday Croom (*Edin. Med. Jour.*) records an exceedingly interesting case of retroversion of the gravid uterus which terminated fatally. The case was very difficult of diagnosis, as the following history will show. The patient was sent to the hospital under the impression that she was suffering from an ovarian tumor complicated with pregnancy. She was 43 years old, had had nine children and several miscarriages, last child 14 months ago. She had missed three menstrual periods, though during the whole time there had been every day or two a slight discharge of blood. Her abdomen began to rapidly increase before the third period. She had passed water irregularly, having sometimes incontinence and sometimes difficulty in passing. On examination an even smooth tumor reaching midway between the umbilicus and ensiform was found, moderately tender, dull on percussion, with resonance in flanks A well-marked bruit could be heard all over.

On vaginal examination the posterior vaginal wall projected, and behind the posterior fornix was a large irregular doughy mass; the cervix could not be felt; through the anterior vaginal wall a similar boggy mass could be felt. A catheter was passed, and although the instrument passed up to the ring and was introduced three times, there was no result. Later on the same day, however, catheter being again passed, drew off 116 oz. of urine, which was ammoniacal and contained blood and pus. The tumor became slightly smaller and less tense, but otherwise remained unaltered except that the bruit was less distinct.

Dr. Croom considered that the most probable diagnosis was a pelvic tumor complicated with pregnancy and hydramnios or myxoma of chorion. The fact of the drawing off of the urine not causing the tumor to disappear, and the well-marked souffle being against its being distended bladder, and the size of the uterus being much greater than normal at the third month, against normal pregnancy. The same night the patient became delirious and comatose, and died next day.

A *post mortem* examination was made and the parts frozen and cut, drawings of the sections being appended to the paper. The following condition of parts was found:—The uterus was gravid, retroverted, and incarcerated in the pelvis. The abdominal tumor, was the distended bladder containing urine and blood-clots.

The lower portion of the bladder was completely shut off from this upper distended portion, by compression of the bladder walls between the uterus and bony pelvis. The part compressed included the trigone, except a small part near the left ureter, which opened into the distended portion; the right ureter opening into the compressed portion. The urethra was not compressed or distorted, thus the catheter when first passed went into the empty portion and then coiled on itself. When passed the second time the previous pelvic examination, by displacing the uterus, had opened a passage between the two portions, and the instrument passed into the bladder, but probably became choked by blood-clot after some urine had come off.

An unusual point was the condition of the cervix; it was not high up, but could not be felt on vaginal examination because of its condition, being so thinned out as to be unrecognisable, thus differing markedly from the condition usually depicted in retroversion, when it is shown as solid and projecting, and by its own pressure on the urethra or bladder, giving rise to retention. There was hydronephrosis of both kidneys, but more especially of the right, whose ureter opened into the compressed portion of the bladder, the patient undoubtedly dying of uræmia.

The most instructive point about this is that it teaches us that in retention of urine from retroversion of gravid uterus the obstruction is not always in the urethra, and that the repeated passage of a catheter without any result does not negative the possibility of an abdominal tumor in these cases being a distended bladder. —*Birm. Med. Rev.*

PYRETICS.—As a contrast to the numerous *anti*pyretics recently introduced, another new substance deserves mention, viz.: tetrahydro-beta-naphthylamine, which has been found by Filehne to possess the property of *raising* the temperature of the body by several degrees. It is presumed that this compound, or others of the same nature that may be discovered hereafter, will be found of practical use in therapeutics.—*American Druggist.*

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, JULY 16, 1890.

THE CANADIAN MEDICAL ASSOCIATION.

The Canadian Medical Association was organized about twenty years ago, and the first meeting was, we believe, held in Quebec. Its history is, therefore, pretty well known to many of our active practitioners. It is exceedingly important, from a national standpoint, that it should prosper. Its prosperity can scarcely be considered to have been of a very progressive character. Some of its meetings have been remarkably successful in every respect, others have met with only a limited amount of success, in numbers at least. The reasons are, of course, well known; we have a large country which can scarcely be called full at the present time. It is a long distance from Halifax to Victoria, and meetings at either end of this immense tract are apt to be rather thinly attended; one of the meetings held at Halifax was an example. The meeting last year at Banff, on the other hand, was comparatively large, very instructive, and exceedingly enjoyable; and was probably the most thoroughly representative congress of Canadian Physicians that this country has even seen. It was really a great pleasure as well as a high privilege to meet at that time such a body of practitioners gathered from all parts of our great Dominion.

The largest assemblages have generally been found in Montreal and Toronto, with Hamilton, Ottawa, and London not far behind. We hope our esteemed president of the past year, Dr. Harry Wright, of Ottawa, will gather the clans of his mountains and valleys and appear at the

next meeting in full force. We have heard good reports from that district and hope to have a full representation. Our friends in Montreal are working with a will, and are likely to contribute largely towards the success of the meeting. Hamilton contains many of the veterans of the Association, who will undoubtedly do good work as on former occasions. The cities and towns farther west contain large numbers of loyal supporters who are likely to prove their allegiance by rendering material assistance.

The twenty-third annual meeting will be held in Toronto on the 9th, 10th, and 11th of September next. The incoming president, Dr. James Ross, has already done much to assure its success. A large and influential committee of arrangements has been organized, and great efforts will be made to give our visitors a warm and brotherly welcome. We hope to see among those visitors large numbers from the far east and the far west. Much will depend on the individual efforts of members in all parts of the Dominion. We would feel much disappointed if a large proportion of our generous and hospitable friends in Winnipeg failed to put in an appearance. We might say the same respecting the physicians of Manitoba, the whole Northwest Territory, and British Columbia. Turning to the east we will remember that fair promises were made by members from the Maritime Provinces, and we sincerely trust that they will be remembered. Dr. James Bell, of Montreal, the able, indefatigable, and courteous secretary, requests members intending to present papers to notify him at as early a date as possible.

THE ONTARIO MEDICAL COUNCIL AND ITS EXAMINING BOARD.

The appointment of Dr. Oldright as an examiner in Chemistry, was one of those marvellous acts on the part of the Ontario Medical Council the reasons for which it would be difficult for any ordinary mortal to comprehend. The doctor never made any pretensions to any special knowledge on this subject. Not a solitary member of the Council had the slightest reason to suppose that he alone of the University Medical Faculty was full of chemical lore. The Council had decided that the examinations in chemistry were to be made more practical in their character. Not one of them thought that Dr. Oldright was the best man to carry out their wishes. They were distinctly told by the representatives of the University that this was not the subject which should be given to him, and yet they voted almost to a man against those representatives who were in a position to know what they were talking about. Why, then, did they do it? No mortal of this sphere can tell.

Are the members of the Council perfectly careless and indifferent as to the fitness of the examiners for their various positions? No! We must do them justice, and say that they were exceedingly careful as a rule, and as a consequence, they have chosen, on the whole, a good Board. Unfortunately, they discovered at the last minute that the Medical Faculty of the University of Toronto had no member of its teaching staff on the Board. Then, again, they were confronted with the idiotic rule which prevents a teacher of chemistry from examining on that subject. Whether the fathers of this law feared that an examiner might have too intimate a knowledge of his subject, we know not, but there it stands as an obstacle in the way of proper appointments. The Council made choice of an examiner—Dr. Oldright—a man eminently qualified for such a position, if the right subject were assigned to him. This latter consideration, however, was altogether too insignificant for this great body to spend much time over. They were in a hurry, they had chosen their man; they had found a subject for him; they had thrown aside one of the most conscientious and capable examiners that their Board had ever contained, but then he didn't own a school or a territory; therefore, that didn't matter. The bill was full; the Council was happy.

The following day, there appeared in the daily press an intimation that the name of Dr. Oldright was substituted for that of Dr. Acheson, as examiner in Chemistry. To say that the medical world was astounded, would be putting it very mildly indeed. Some thought it was a simple insult to Dr. Oldright, whose name had been proposed for one of the final subjects; many thought it was a mistake; others, who had grown accustomed to the vagaries of the Council when it was in a hurry,

simply smiled, and said "Its the old story; those men are not to be trusted."

Would it be too much to ask the Council to beware of those final few minutes when they have grown so weary and are in a hurry to get home? Fortunately, Dr. Oldright has solved the problem, as far as he is concerned, by promptly refusing to act. The Council can now get out of its muddle as seemeth best, when its executive *gets time* to consider the matter.

PUFFING EXTRAORDINARY.

From time to time we see in the Toronto Press references made to the wonderful progress of McGill Medical College, but a half column which recently appeared in one of our prominent journals beats the record. Its past and prospective history is painted in very glowing terms. Its numbers are large, but its advantages are larger. Its professors are wonders to behold and listen to. Their success is due to the fact that most of the members of the faculty devote their whole time to teaching and research, instead of only so much time and energy as could be spared from an exacting medical practice. "An unlooked-for proof" is given in an interesting story respecting the work of a certain German commission that came to this continent on a tour of inspection of our medical colleges, and, after a weary tramp, met McGill, which alone (apparently) was competent to rank with Berlin and Leipsig. This is probably an effectual, if not dignified style of advertising, but we believe McGill could afford to get along without it.

NOTES.

THE employment of unqualified assistants in England is attended with many drawbacks. A coroner now complains that the public are put to an unnecessary expense where an individual dies, having been attended by an assistant who cannot legally sign a death certificate; an inquest is, in such cases, rendered necessary. The public are further deceived in many cases, being led to think that they are getting the services of a qualified person. There is a growing objection in England to having any but qualified assistants.

WE observe in a recent number of the *Lancet*, that the General Medical Council has determined "that the course of professional study, after registration, occupy at least five years, on condition that the fifth year shall be devoted entirely to clinical work"; and by subsequent resolutions, "that all examinations, except the final examinations in medicine, surgery, and midwifery, shall be passed before the final year intended for medical work"; that "the regulations of the examining bodies, and of the schools, shall be so framed that attendance on systematic courses may be concluded at the end of the fourth year of study, so as to permit of the student devoting the fifth year to clinical work," and that "the fifth year shall be devoted to clinical work at one or more public hospitals or dispensaries, provided that of this year six months may be passed as a pupil to a registered practitioner holding a public appointment or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities." These resolutions are only recommendations to the examining boards, but the General Medical Council has the power of appealing to the Privy Council, should the curriculum laid down by our examining authority, and the examinations conducted by it, be not deemed satisfactory. We may, therefore, assume that the various examining bodies will lay down for the student's curriculum regulations embodying these resolutions, and that such regulations will come into force on January 1st, 1892, that being the date decided on by the Council as the just and proper time from which these changes in medical education and examination should take effect.

Meeting of Medical Societies.

THE ONTARIO MEDICAL ASSOCIATION.

(Continued from page 312 of last issue.)

June 11th, Evening Session.

DISCUSSION IN SURGERY.

Hon. Dr. Sullivan read a paper on

HERNIA,

in which he referred to the anatomy of the parts involved, and called attention to the fact that

the coverings of a hernia, as taught in the dissecting room, were rarely, if ever, recognizable on the operating table. He insisted on the necessity for early operation whenever strangulation was diagnosed, and condemned the practice of operating for radical cure in patients who could wear a truss, which was efficient in preventing the bowel from descending.

Dr. Grasett referred to the recent literature on the subject, more particularly to the published papers of C. B. Lockwood, on the influence of mesentery in the production of hernia; also a recent article by F. M. Caird, on the treatment of gangrenous bowel in strangulated hernia. Dr. Grasett was of opinion that when a truss can be well borne and the patient is capable of looking after it, when, too, he can afford to change them frequently when necessary, under such circumstances, it is best to let well alone, and to trust the efficacy of a truss, rather than advocate an operation for radical cure. When these factors are not present, however, in the light of the present success of the radical cure, he would recommend operation.

Dr. Waugh, London, considered that a thorough acquaintance with the anatomy of the parts was essential for the proper performance of taxis; here, anatomical knowledge is much more important than in cases in which we operate.

Dr. Andrew Smith, of New York, read a most interesting and instructive paper on

EMPYEMA,

with the mechanical results of opening the thorax. The paper was illustrated by apparatus.

Dr. G. M. Aylsworth, Collingwood, opened a discussion in medicine by reading a paper entitled,

A PLEA FOR A MORE LIBERAL OR SCIENTIFIC SPIRIT OF INVESTIGATION ON THE PART OF THE REGULAR OR RATIONAL SCHOOL OF MEDICINE.

The author of this paper sought to defend the principles of the homœopathic practitioners, and asked for an unprejudiced investigation into the results of their treatment.

Dr. Aylsworth was followed by Dr. Ross, of Barrie, and Dr. J. H. Richardson, of Toronto. Both of these gentlemen showed conclusively that homœopathic teaching and practice were utterly irrational, and Dr. Richardson referred to the fact that some of our greatest scientists had thoroughly investigated the subject very many years ago, and proved conclusively that homœopathy was founded on unscientific principles, and that the practice was unsound in the judgment of rational men.

June 12th, Evening Session.

SURGICAL SECTION.

Dr. Groves, of Fergus, read a paper upon

PERITYPHLITIC AND PELVIC ABSCESS.

The reader had treated seventeen cases of perityphlitic inflammation, of which thirteen went on to the formation of pus, and were operated upon; the remaining cases terminated in resolution; all recovered. The treatment advocated was perfect rest, and thorough emptying of the bowels if there seem to be impaction; opiates to relieve the pain, and locally warm applications. Should resolution not take place and pus form, then there should be as little delay as possible in operating.

Dr. Teskie endorsed the opinion expressed by the reader of the paper, that an early operation is necessitated when pus forms. This view was also held by Dr. Holmes, of Chatham, who stated that if the surgeon is in doubt, the safer plan is to operate.

Dr. Temple thinks this trouble is more common than we are led to suppose; the diagnosis, however, is not always established. Repeated attacks of inflammation in this region are often due to diseased appendix.

Dr. N. A. Powell, of Toronto, described Dr. Buck's method of operating in these cases. Two cases had been operated upon by him; one of these successfully, the other not.

Dr. J. F. W. Ross read a paper on

CASES OF EXTRA AND INTRA-PERITONEAL INFLAMMATION, WITH OR WITHOUT ABSCESS FORMATION—A PLEA FOR OPERATION.

The author advocated operation in cases in which an abscess had formed; he further considered it wise to conduct the exploratory operation in cases of a doubtful nature.

Dr. Powell, of Ottawa, thought that we are hardly justified in operating except in traumatic cases and in general cases where pus has been made out. Operations should not be conducted to search for abscesses. He related a case in which pus had developed; he advocated operation, but, it being denied, she passed pus by the bowel the next day; this, however, was exceptional, and in similar cases he would operate.

Dr. Hunter recommended early operation, and thought valuable time should not be wasted in waiting for experts.

Dr. Teskie recommended operation in local inflammation, but in diffuse inflammation the parts become agglutinated, and operation is thus rendered impossible.

Dr. Temple would operate early in cases of general puerperal inflammation, and in tubercular peritonitis.

Dr. Alice Pickering, of Toronto, exhibited a fœtal monstrosity similar to the

SIAMESE TWINS.

There was only one placenta.

Dr. Wishart, of London, then read his paper on

ABDOMINAL NEPHRECTOMY FOR HYDRONEPHROSIS,

with a report of two operations. He referred to the difficulty in diagnosis; this is increased in cases in which there is great enlargement, where the patient, when seen for the first time, presents a tumor filling the whole abdomen. The author described two cases of advanced hydronephrosis; in both an operation was begun whilst entertaining a wrong opinion as to the nature of the condition. In these cases nephrectomy was performed through an incision in the middle line anteriorly, and both patients recovered. The difficulty of diagnosing between hydronephrosis and ovarian tumor was dwelt upon.

Dr. Trenham, Montreal, thought that aspiration for diagnostic purposes was useful in cases of accumulation of fluid within the abdomen. Urine may thus be discovered. He narrated a case where repeated aspirations, in which fluid urine was withdrawn, eventually effected a cure. He thought Dr. Wishart's success was exceptional, and it was questionable whether the operation of nephrectomy in such cases is justifiable or not.

Dr. Gunn, of Durham, stated that the difficulty in diagnosis was often cleared up by the use of the microscope in examination of the fluid.

Dr. MacDonald recommended nephrectomy as the primary operation. It is stated that nephrectomy following nephrotomy is less serious and the results, under such circumstances better.

MEDICAL SECTION.

Dr. Addison, of St. George, read a paper on the

TREATMENT OF PNEUMONIA.

The author descussed freely the uses of internal medication, and of outward applications to the chest wall. A somewhat animated discussion followed, in which a number of gentlemen took part; among others, Dr. Pringle, Toronto, suggested the use of the ice-pack in special cases, and narrated a case. He advocated also the use of hot dry linseed instead of a wet poultice.

Dr. McPhedran stated that pneumonia is a specific fever, and not a simple inflammation of the lung; there are abortive cases which recover with or without treatment. The speaker has had good results with heroic doses of digitalis; it is very necessary to aid the right ventricle, and for this digitalis is the best agent in full doses. He spoke of the hyperpyrexia, and would use the ice-bag and not internal medication.

Dr. Acheson referred to the uses of oxygen inhalations.

Dr. John Ferguson stated that two distinct types of the disease existed, the sthenic and the asthentic, requiring different forms of treatment.

Dr. A. James Johnstone then read his paper entitled,

SOME RECENT TREATMENTS IN DIABETES.

This treatment was discussed by Drs. Duncan, Bowlby, Addison, Acheson, Ferguson, and Sheard.

Dr. Bowlby referred to a case complicated with malaria, in which the patient recovered, after purgation with calomel followed by quinine.

Dr. Acheson referred to the presence of glycosuric acid being mistaken for sugar by the cupric sulphate test.

Dr. Pickard, Thamesville, read a paper on

PURPURA FOUDROYANT.

This condition is one in which extensive hæmorrhages occur and cause rapid exhaustion of the patient. Dr. Hunter, of Toronto, related a case of a similar nature. Dr. Hamilton regarded Dr. Pickard's case as one of purpura hæmorrhagica.

Thursday afternoon.

GENERAL SESSION.

Dr. Ryerson opened the discussion in ophthalmology by reading a paper on

THE OPHTHALMOSCOPE IN RELATION TO DISEASES OF THE NERVOUS SYSTEM.

The use of the ophthalmoscope, as an aid to diagnosis, was fully dealt with.

Dr. Palmer drew attention to the great aid to diagnosis of brain disease, furnished by the retina as shown in optic neuritis. Important pathological changes may exist without any subjective symptoms; the opposite condition may also be present, as in hysterical amaurosis.

Dr. Wishart, of Toronto, emphasized the great necessity of examining the fundus in every case of suspected nervous disease; he thought every general practitioner should be able to use the ophthalmoscope almost as readily as the stethoscope. He also referred to appearances in brain diseases as evidenced by neuritis, etc.

Dr. Hubbell, of Buffalo, thought all general practitioners ought to be able to recognize optic neuritis and optic atrophy.

DISCUSSION IN OBSTETRICS.

Dr. Carson introduced the subject of

THE PREVENTION OF POST-PARTUM HÆMORRHAGE.

The subject was ably dealt with, and sound principles were advocated as worthy of observance in the lying-in room. It is the duty of all practitioners to know every detail in the treatment of this condition when it occurs, but Dr. Carson spoke only of precautionary measures which, if adhered to, would place post-partum hæmorrhage in the category of rare complications.

Dr. Powell, of Ottawa, thought that post-partum hæmorrhage may occasionally occur, no matter how careful one may be. He limited his remarks to true post-partum hæmorrhage, *i. e.*, hæmorrhage from the placental site. We may expect it when the uterus has been over-distended, as in twins, hydramnios, etc.

Dr. Baines, Toronto, referred to the effect of tieing the maternal end of the divided funis as a cause of post-partum hæmorrhage.

Dr. Temple does not believe that clotting of the blood in the vessels is a natural method of closing the vessels after detachment of the placenta. He narrated the post-mortem appearances in a case which came under his observation.

Drs. Thos. Mackenzie and Pringle also took part in the discussion.

SURGICAL SECTION.

Dr. Atherton, Toronto, read a paper on

A CASE OF HYSTERECTOMY FOR FIBRO-CYSTIC TUMOR.

The patient and the tumor were exhibited. The case was one of great difficulty, requiring a long and tedious operation. The result was eminently satisfactory.

Dr. Trenham, Montreal considered the operation to be one of the chief achievements of modern surgery. He had performed the operation five times, the first in 1876 for fibro-cystic tumor; the patient is still alive. He prefers to perform the operation in a special way, so as to bring the edges of the abdominal incision together as near as possible around the pedicle, leaving the part which is to slough off entirely outside the belly. The advantages of the method are its simplicity, the clamp can't slip, and the burrowing of pus is prevented. The burried suture was recommended.

Dr. H. Howitt, Guelph, read the

REPORT OF A CASE OF ACUTE SUPPURATION OF THE KNEE-JOINT.

The case was one in which the surgeon had cut down and thoroughly irrigated the suppurating joint cavity; after careful washing out and subsequent antiseptic treatment, the wounds healed and the joint ceased to discharge pus. The result was a complete restoration of function in the articulation.

Hon. Dr. Sullivan complimented the doctor on the success attending his operative procedure in this case.

Dr. Atherton related a case of suppuration in the knee following compound fracture of the patella; the joint recovered in ten weeks.

Dr. Strange then read a paper on

STONE IN THE FEMALE BLADDER.

He referred to three methods of operating, 1st, crushing; 2nd, cutting; 3rd, dilatation of the urethra.

In crushing, there is some difficulty in keeping fluid in the bladder, and there is not the same support for the staff of the lithotrite.

In cutting, it is simple enough to cut into the bladder from the vagina, but there is a danger of the occurrence of vesico-vaginal fistula

Dr. Strange narrated three cases of dilatation; in two of these the ages were respectively 70 and 60 years. In the former a uric acid stone of large size was removed; there was dribbling of urine for a week or two subsequently, but this ceased eventually. The method employed was to give chloroform, dilate with dressing-forceps sufficient to introduce the finger, and complete with digital dilatation.

Dr. Powell, Toronto, narrated two cases in female children; in one case there were three stones present, the aggregate weight being 241 grains. The method employed was to dilate urethra, introduce lithrotrite, crush, and wash out the debris. The cases were successful.

Hon. Dr. Sullivan referred to a case where the stone was as large as the fist; it was crushed and removed as debris. The operation was tedious. The woman made an excellent recovery.

Dr. J. F. W. Ross quoted Lawson Tait with reference to the occurrence of vesico-vaginal fistula as a sequel to cutting through the vagina into the bladder. Tait, far from fearing a fistula, finds it difficult to keep the wound open for drainage.

MEDICAL SECTION.

Dr. Moorehouse, London, read a paper on

INFLUENZA.

He dealt with the complications and sequelæ of influenza. The discussion was carried on by Dr. Mitchell, Enniskillen; and Drs. Price, Brown, Ferguson, Trow and Sheard, of Toronto.

Dr. Ruttan, Napanee, exhibited a form of apparatus for enabling patients to inhale hot air. It is simply a piece of metal gas tubing, bent at its middle into a single coil, which can be heated, and the patient inhales through one end. He has inhaled through it air at a temperature of 250° F.

Dr. Bray, of Chatham, read a paper on

TYPHOID FEVER.

Certainty of diagnosis is to be insisted upon; very little medicine is necessary; sponge freely and give the patient nothing but peptonized milk. Stimulants should be freely given if a weak heart demands it. When constipation occurs, due to paralysis of the ulcerated intestines, give no purgatives. These points were elaborated in the paper read.

Dr. Hunter, Toronto, spoke of the pathology of the disease and the indications for treatment from these considerations. The early use of the cold bath should be employed to reduce temperature.

Dr. Sheard spoke strongly in favor of alcohol as the most useful drug to have at our command in this disease.

Thursday evening.

DISCUSSION ON THERAPEUTICS.

Dr. J. L. Davidson read a paper on

EXPECTORANTS.

His paper appears at page 319 of this journal.

Dr. Spencer believes the terebinthinates to be about the most useful of all expectorants; he also derives great benefit from the tar preparations in bronchitis of young children and in winter cough of old people.

Dr. Moorehouse (London) concurs in Dr. Davidson's classification and arrangement. He is a strong advocate of copaiba when there is excessive secretion.

FINAL PROCEEDINGS OF THE ASSOCIATION.

The reports of various committees were presented. The Secretary read his report, which was adopted. The Association voted $100 to the Ontario Library Association.

A vote of thanks was moved to the retiring president, to which Dr. Temple replied.

Dr. Moorehouse, of London, was then installed in office as President of the Ontario Medical Association for the ensuing year.

Hospital Reports.

MOVABLE KIDNEY—NEPHRORRAPHY.

Under the care of I. H. Cameron, M.B., in the Toronto General Hospital.

J. S., æt. 22, single, teamster; admitted under the care of Dr. Cameron, in May, 1890, with the following history: In February, 1889, he was engaged carrying planks on his right shoulder. While tossing one of the planks from his shoulder he experienced a sensation as if he had sprained his right side. He felt at the time considerable pain in the shoulder, but more particularly in the right hypochondriac region and in the right chest. He continued his work and by night the pain had considerably increased.

Fourteen days after, the pain continuing, he consulted a doctor; up to this time he had continued his work with difficulty; after a fortnight's treatment he was no better. In April (two months after the sprain), he noticed for the first time a lump the size of a pigeon's egg in the right hypochondriac region at the seat of the former pain. The lump increased gradually in size for two months, and at the end of that period it had attained its present size, about that of a hen's egg. It has not grown any for the past eleven months, the pain has neither increased nor diminished in intensity.

The patient has always enjoyed good health, and has never had any serious illness; his parents are living and healthy; there is no history of consumption in the family.

STATE ON ADMISSION.

Local.—Patient states that he has a lump in the right side which pains him slightly and is somewhat tender on pressure; the pain radiates to the lumbar region and to the region of the right shoulder.

On inspecting the abdomen nothing abnormal is noticeable; there is no apparent swelling in affected area. On palpation, however, a lump the size of a duck's egg is felt at the outer margin of the right rectus muscle, below the ninth costal cartilage. It seems about 1½ inches in width. Its lower margin, which is rounded, projects, on deep inspiration, 2 inches below costal margin. Its upper limit cannot be defined. Its consistence is hard, its surface smooth. It can be moved slightly from side to side, and can be forcibly depressed to a slight extent, but cannot be placed in the loin. It descends 1 inch during deep inspiration and ascends during expiration. Patient states that it is more palpable during fasting than after a meal. Percussion note resonant over the tumour, note slightly higher pitched and flatter when it comes down during inspiration, and then the note is almost dull.

Present state of health, good; circulatory, respiratory, and nervous systems normal. The digestive system is slightly affected; his digestion was good before the accident, but now he has slight gastric derangement amounting merely to occasional gaseous eructations and sometimes water brash. Never any vomiting or nausea. He is also troubled with constipation. Urine normal.

Dr. Cameron diagnosed the case as movable kidney and proposed to cut down upon it in the loin and secure it there by suture.

Operation: 3 p.m., May 29th.—Chloroform administered; an oblique incision was made in the space between the last rib and the iliac crest, running for 3½ inches parallel to the rib and its posterior extremity being over the outer border of the erector spinæ muscle. The superficial structures were divided and the muscles, latissimus dorsi and external oblique, were cut across throughout the entire length of the incision; the internal oblique and transversalis were to a slight extent cut and the outer edge of the quadratus lumbarum was exposed, the deep layer of the lumbar aponeurosis was divided on a director. The hæmorrhage was checked by means of Spencer Well's forceps. The circum-renal fat was now exposed and the finger was introduced into the wound and the parts explored. The kidney was found abnormally mobile, it could readily be displaced forwards and upwards to a considerable extent and could be pressed towards the spine. Bimanual examination was made with one hand over the front of the abdomen and the finger of the other hand in the wound in the loin. On pressure exerted in front, the kidney distinctly came back to its place. On hooking the finger around the lower end of the kidney and pressing it firmly backwards into its normal position, the tumor could not be observed on pressure of the hand anteriorly, but became at once prominent when the kidney was pressed forward.

There seemed little doubt that the tumor correctly diagnosed was the kidney. Two silk sutures were passed through the deeper portions of the edges of the wound, the stitches were made to penetrate a portion of the muscles and the lumbar aponeurosis in the lower edge of the wound; they were then carried through the renal capsule and on through the deeper tissues of the upper edge of the wound. These sutures were tightly tied, the wound was thoroughly irrigated and the superficial portions of the wound were brought together by means of several points of suture. The superficial parts surrounding the wound were thoroughly cleansed and a Keith's dressing applied.

During the subsequent course of the case the temperature remained normal; there was no pain and the dressing applied at the operation was not removed for three weeks when the healing process had been completed. The sutures were removed and a pad was bandaged on over the abdomen anteriorly.

June 8.—There is no tumor to be felt where it had formerly been observed. There is slight tenderness on deep pressure over the kidney.

Remarks.—The condition of movable kidney is more common in females than in males. Pregnancy has a great share in its production. In men, however, injury may be the cause; thus Henry Morris states that "in many instances the immediate cause of the mobility has been of a traumatic nature, such as a blow or a kick on the loins, a jerk, or some severe or sudden concussion."* The history of traumatism in the case just narrated is worthy of note as a very possible factor in causing the condition. Disturbance in function of the stomach and large intestine are usually more marked than in the present instance; the gastric trouble has been attributed to the dragging or pressure of the kidney upon the middle portion of the duodenum.

The diagnosis from the physical signs in the case was extremely difficult; the position of the tumour led one to suspect gall-bladder. Further, cases have been reported in which a distended gall-bladder has been mistaken for a floating kidney. Thus Mr. Lawson Tait records a case of distended gall-bladder, operated on by him, which had been pronounced a floating kidney by several distinguished authorities*, and the same authority is quoted by Morris in saying that out of thirteen cases in which the diagnosis of movable kidney was wrongfully made, seven were proved to be distended gall-bladder, four ovarian cystomata with long pedicles, and two were tumors of the pancreas. The shape and size of the tumor in the case under consideration pointed more to kidney than gall-bladder, and a resonant percussion note could be elicited which would have been impossible had the distended gall-bladder been the cause of the trouble.

It is noteworthy that in this case there was no drainage tube inserted in the wound, which was completely closed by suture; the antiseptic details had been thorough, and healing took place without the formation of pus, the occurrence of tension or rise of temperature. The dressing applied on the operating table was not removed for three weeks, when healing was complete.

Nephrorraphy has been attended with such successful results in the past, that the operation is to be advocated.

* Surgical Diseases of the Kidney. Henry Morris, p. 30.

Clinical Notes.

HERNIA OF OVARY.

BY JAS. A. M'MAHON, M. B. TOR., ST. CATHARINES.

April 1st, 1890. I was called to see Mrs. M——. I found she had considerable peritonitis, the pain being greatest over the site of the left ovary. She did not progress as well as I expected under the administration of the morphine, and on April 4th she was worse. On questioning her further, she said that she had a lump in the left groin which, from motives of delicacy, she had not before admitted. On examination, I found a pyriform tumor situated in the left labium majus, which was hard and extremely painful. She said that it had been there for about five weeks, that it was painful at all times, and particularly when standing for any length of time or walking, but that it had become larger and more painful the last two days. She also told me that during her previous menstrual period the lump has enlarged and become excessively painful. Her bowels were regular, but there was some little pain on defecation. When the tumor was manipulated

* Edin. Med. Journal, October, 1889, p. 514.

it caused extreme pain over the site of the left ovary, and so much so that she would not submit to it. A poultice was applied, and next day I found that her menses had come on and that the pain was much less. The tumor could now be manipulated, and on asking her to cough, a distinct impulse was felt. I tried to reduce the swelling by taxis, and in a few minutes succeeded, with immediate relief from the great pain over the ovary. The peritonitis rapidly disappeared, and in two days there was no trace of it. Here was a tumor in the left labium, hot, hard, and very painful; the diagnosis was between abscess of the vulvo-vaginal glands, an inflamed incarcerated hernia, phlegmonous inflammation of the labium majus, and pudendal hæmatocele. The history of the case (no injury or muscular efforts), duration of existence and mode of development excluded hæmatocele. From phlegmonous imflammation of the labium majus, it was easily differentiated by its distinct pyriform and limited outline, the phlegmonous inflammation being diffuse, the reducibility of the tumor proved it to be a hernia. The next thing to determine was what variety of hernia. It was non-elastic and non-resonant, at each menstrual period it became larger and more painful, the pain always being referred to the site of the left ovary. I diagnosed hernia of the left ovary, which, being imprisoned in the inguinal canal by the side of the round ligament, was subjected to great pressure when in common with the rest of the organs of generation, it became engorged with blood at the menstrual period. The interest in this case lies in its variety. The literature on the subject is very meagre, most of the authorities merely stating that the condition does exist but is very rare.

In the *Medical News and Library*, Philadelphia, Nov. 1879, the following symptoms of this condition are given: "Pain on walking, and still more at the time of defecation; sometimes pain whenever the rectum is occupied with fever, pain in the act of coition, and attacks of pain in one both groins, according to the single or double nature of the displacement. If one ovary alone descends, it is generally the left."

Personal.

DR. MCPHEDRAN, of Toronto, is spending his holidays at Prince Edward Island.

DR. THORBURN, of Toronto, started for England, July 12th. He will visit his son, Dr. Jas. D. Thorburn, at present in Birmingham.

DR. OLDRIGHT, of Toronto, was, at last reports, at Halifax. He has somewhat improved in health, though not quite up to the mark.

DR. W. B. RICHARDSON, of Donald, B.C., son of Dr. J. H. Richardson, of Toronto, has been appointed superintendent of the new hospital recently opened in Victoria, Vancouver Island.

DR. ALLEN BAINES, of Toronto, was entertained by a number of his friends at a dinner in the Island Building of the Royal Canadian Yacht Club, July 4th, on the eve of his departure for England, where he is to be married this month. Deep sympathy was expressed for the Toronto girls, but all united in expressing the kindest wishes for future happiness to Dr. Allen and the bride that is to be.

DR. T. S. COVERNTON sailed from Montreal, July 5th, for England, and rumor says he will be Dr. Baines' best man at the happy event.

Births, Marriages, and Deaths.

BIRTHS.

SWEETNAM.—On Sunday, July 6th, the wife of L. M. Sweetnam, M.D., of a daughter.

SCOTT.—At Moss Side, Rosedale, on June 28th, the wife of Dr. A. Y. Scott of a son.

RYERSON.—On the 28th June, 1890, at Newnham House, College Street, the wife of Dr. G. Sterling Ryerson of a son.

COLLEGE OF

Physicians and Surgeons

OF ONTARIO.

Medical Council Fall Examinations

SEPTEMBER, 1890,

IN TORONTO AND KINGSTON.

The written Primary and Final Examinations commence on Tuesday, the 23rd September, 1890

By Order

R. A. PYNE, Registrar,

College Physicians and Surgeons of Ontario, Toronto.

N.B.—Candidates' application forms may be had on application to the Registrar. The application is to be properly filled out and declaration executed, and delivered into the hands of the Registrar, accompanied by the tickets and certificates, and the Treasurer's receipt not later than the 17th of September, 1890. All candidates for Final Examination are required to present their primary tickets and certificates at the same time. Candidates for Primary who have attended a prior examination will require to pay a fee of $10. Candidates for Final who have attended a prior examination will require to pay a fee of $10.

The Treasurer's address is Dr. W. T. Aikins, 282 Jarvis St., Toronto.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

☞ Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, AUGUST 1, 1890.

Original Communications.

LACERATION OF THE CERVIX UTERI AND THE INDICATIONS FOR ITS RESTORATION.

BY THOS. ADDIS EMMET, M.D.

Surgeon to the Woman's Hospital in New York.

It is now twenty-eight years since I first performed the operation for closing a lacerated cervix; seven years afterwards, for the first time, it was fully described by me in a paper read before the N.Y. County Medical Society; and in 1871 a second paper, setting forth the result of some nine years of observation, was presented to the same Society. In the discussion which followed, before an unusually large meeting, the operation received a most flattering endorsement, and without a dissenting voice.

For about fifteen years past the operation has been performed abroad, but the practice has been confined to a limited number of operators, and it has been, with but a few exceptions, favorably received by them.

After a review of all that has been advanced in favor of or against the operation, it may in truth be claimed that the necessity for it has received to a greater or lesser degree the endorsement of every operator who has fairly investigated the subject.

Whatever the incentive may have been with those who have found no place for the operation, their opinions were not based upon an unbiased personal observation, and they would doubtless protest if a criticism on their own work was so unfairly meted out to them.

This operation has been accepted for a number of years in the United States, where it is generally practised, and I do not hesitate to say that it has been received simply on its merits, for in no portion of the world is the medical profession to-day more active and alive to progress than in my own country.

With some noted exceptions the merits of the operation have not been fairly tested abroad by the profession. To us the reason may be more apparent than to themselves, who may be unconscious of a seeming indifference among many to progress made in other countries; a feeling, I am happy to say, which has no place with us on the North American continent.

An operative procedure which has been practised by the profession for so many years, as this has been, is no longer on trial as to its necessity. The only honest difference which can arise is to determine by observation the limit of its usefulness, within which, it is claimed, more can be accomplished by it than by any other means at our command. Therefore the opinion of the man who never performs the operation is as valueless as that of another who goes to the other extreme; and both are equally censurable.

As the result of twenty-eight years of observation and close study of the subject, I now believe that it should be employed only for the relief of certain reflex symptoms accompanied by more or less impaired nutrition, and to guard

against the occurrence of epithelioma. Our present duty calls for the operation under these circumstances, while it rests with the profession in the future to lessen the number of cases which should then need surgical interference.

The question presents itself as to how far the the profession is to be held responsible for this injury. Observation clearly teaches that a woman rarely, if ever, gives birth to a child without the occurrence of laceration of the cervix, to some degree, and that extreme injury does sometimes result unavoidably in the hands of the most experienced and accomplished accoucheur. Moreover, it has been observed, that under favorable circumstances, nature will promptly repair, within a wide range, all damage, and in a manner which cannot be attained by art.

The beginning of the difficulty after labor is blood poisoning, for which, as a rule, either the doctor or nurse is responsible. We then have lymphangitis, phlebitis, cellulitis, and more or less septic peritonitis, because the lymphatics communicate directly with the peritoneum. The most careless observer cannot fail to note, under these circumstances, that there is something wrong with the condition of his patient, and, with the failure in the secretion of the milk, he may be almost certain that septic poisoning has taken place.

After reaction from the labor has set in, under favorable circumstances, the reparative process of nature begins at once to repair damages, and it is just this tendency that we must utilize to the fullest extent, or the woman becomes an invalid.

As soon as a cellulitis is established after a labor and with more or less local peritonitis, the pelvic circulation becomes thereby obstructed and the effort at repair is for a time arrested. An obstructed circulation must lead to increase of weight and prolapse. Consequently the enlarged uterus settles lower on the floor of the pelvis and it often becomes retroverted. This position offers still greater impediment to the circulation, and as a consequence the flaps of the lacerated cervix gape the wider. Unless we promptly aid the efforts of nature in the beginning of the onslaught, sub-involution of the uterus and vagina remains for an indefinite period, until the repair in the cervix has been properly made. If the case be left entirely to nature, a reaction in time will take place, but only after great damage has been done by the forming of adhesions and the deposit of lymph. The woman then in time makes, what is termed, a bad getting-up. So long as her general condition does not become greatly impaired she may be able to be about, but she does not recover fully her health. Should the lacerated surfaces in the cervix become healed, she will improve temporarily in all the symptoms to be attributed to the anæmia which has to a great extent been due to a profuse leucorrhœal discharge, and which is thus arrested. But the rule is that within a few months, as the cervix becomes hard, a number of anomalous symptoms will be developed, and varying in degree from hysteria to insanity. The manifestations may sometimes seem to be delayed indefinitely, should her general condition remain fairly good. But let the nervous system of a woman in this condition receive some sudden shock, or let her strength be overtaxed by nursing or the exercise of too much care and responsibility, and the intensity of the reflex symptoms seem to become all the more marked from the delay.

To understand the action in these cases, it is necessary to bear in mind the close relation existing between the sympathetic system, nutrition, and the organs of generation. The sympathetic exercises a controlling influence over both functions, but during the menstrual life of the female the influence emanating from the organs of generation is dominant. It follows then that injury in erectile tissue, as a source of irritation, may excite, through the sympathetic system, reflex symptoms in any portion of the body, and that nutrition must also suffer. Hence we see after a proper repair of the cervix, not only a subsidence of all reflex symptoms, but nutrition asserts itself as soon as the source of irritation is removed. But nutrition in the female is always kept in proper check so long as the organs of generation exercise their functions in a state of health. With the decadence of this function, nutrition is no longer controlled, hence the rapid increase of flesh which usually follows the menopause.

We have another class of cases where the extent of injury is much greater, and is accompanied at the labor with a profuse loss of blood from

rupture of the circular artery, but without blood-poisoning afterwards, so these women make a rapid recovery. The extent of injury, however, prevents the parts from uniting properly, and as the tissues of the cervix remain gaping, but free from induration, these women become all the more prolific in consequence of the local condition. Year after year each gives birth to a child, and if the general conditions remain unimpaired, they pass for being unusually healthy women and bring up large families. During the whole period of child-bearing the cervix remains soft and covered with an extensive erosion, which has seldom been more than partially healed during the existence of pregnancy. As the woman with this condition reaches the time for the menopause, and a longer interval elapses, from any cause, between the pregnancies, an unexpected development of epithelioma may occur.

The mucous membrane of the cervix has been gradually undergoing cystic degeneration, preparatory to a change of life, and the blood vessels have become smaller and much decreased in number. It is often observed, in anticipation as it were of this change of life, that nature is most successful sometimes in removing by absorption cicatricial tissue, which has formed, as the result of injury, about the cervix, and so far repairs the damage that the parts are left in a comparatively healthy condition if the process be not hindered. As soon as a sufficiently long interval has elapsed after a pregnancy, the lacerated surfaces will begin to cicatrize from the bottom of the cleft, and the tissues, which were unusually soft before, soon become indurated in a remarkable degree. Several instances have passed under my observation where epithelioma has suddenly sprung up from the bottom of the laceration, and from this newly formed cicatricial tissue, as seed would come up from a furrow. In the absence of positive data on which to formulate an explanation, I can only offer a supposition based upon observation, and one, it seems to me, most consistent with the facts before us. It would seem that after the great changes had already taken place in the tissues I have referred to, the general process was delayed by the effort of nature to repair a local damage. This would necessarily cause a sudden and unusual flow of blood to the parts which are not in condition to meet such an emergency. The result is that what was a benign process in the beginning, as an effort of nature to repair the injury, results in epithelioma, a product of perverted nutrition. Observation teaches clearly that epithelioma follows an injury, but not necessarily every injury. As the result of an unusually large and extended experience, I must state in this connection that I have never seen a single case where epithelioma has developed on the cervix uteri of a woman, unless she had borne children, had miscarried, or had suffered from a criminal abortion; or unless, if never impregnated, the cervix had been divided at some time, or torn open by the process termed divulsion.

Let us now return to a consideration of the duty which must rest upon the medical men of the future, if through their efforts they are to diminish the numbers of laceration of the cervix uteri which will require surgical interference. I have already referred to the active tendency to repair which always exists after labor, if nothing has occurred to check it, and I wish particularly to impress the importance of utilizing this action to the utmost. If the members of the profession can be brought to realize the importance of aiding the efforts of nature to resume action after they have been suspended, and to direct the work afterwards, more could be accomplished during the puerperal month than could be done in years subsequently. Many here present, I have no doubt, can fully corroborate my experience as to the rapidity with which a mass from a local cellulitis after labor will clear up as soon as nature is able to get the work, and will often accomplish the task before the expiration of the lying-in month.

After a very rapid or very tedious labor, or after instrumental delivery, with or without a chill, there may be a rise of temperature and pulse, and a thickening and tenderness on pressure will be detected, by bi-manual palpation, somewhere in the pelvis. While we can assume the fact that septic inflammation has been established through a laceration of the cervix, it is not always an easy matter to recognize the injury or its extent, as the parts are soft and the os patulous in consequence of the œdematous and overstretched condition of the tissues.

Two indications, the most important in the treatment, are made clear—to arrest further blood-poisoning from the raw surfaces, and to empty the pelvic blood vessels sufficiently that the circulation may become again fully established.

To accomplish the first the physician must himself give the hot water vaginal injections, unless he has the aid of a thoroughly trained nurse, who possesses the knowledge and skill necessary under these circumstances to give the injections properly. Copious and frequently repeated hot water vaginal injections are necessary to keep the lacerated surfaces of the cervix as free as possible from being bathed in the discharges, and if necessary the uterine cavity itself must be well irrigated. A weak solution of the bichloride of mercury is useful, but the mode and thoroughness of giving the injections are most important, and perfect drainage is essential, to obtain which, it is often necessary to lay strips of iodoform gauze in the angles of the tear. The frequent use of saline cathartics will prove one of the most efficient means for freeing the pelvic blood vessels, and with the proper use of the hot water injections the veins can be depleted by the one means, and contraction of the capillaries obtained by the other. The saline should be given in the most concentrated form of solution, and often repeated until the effect is produced. If the remedy does not act well, the occasional use of a small dose of calomel, with about twenty grains of bi-carbonate of soda, will make it more efficient. As soon as the condition of the patient will admit of its use, and this is generally after the second week, Churchill's tincture of iodine should be applied every other day over the upper part of the vagina, and while the patient is in the knee and chest position. Towards the close of the month, and as soon as the laceration in the cervix will permit of the exercise of pressure, this should be made by packing the vagina sufficiently with small balls of wool covered with vaseline. The exercise of moderate pressure, judiciously placed will not only aid in stimulating the absorbents, but will also improve the pelvic circulation by lifting the uterus from the floor of the pelvis. Each time the packing is removed, the vaginal injection should be adminstered before it is replaced. The occasional use of a small blister over the seat of the pelvic inflammation is always beneficial, and should be used whenever the patient is heroic enough to submit. Every means should be resorted to for the purpose of improving the general condition, and the patient should not be allowed to assume the upright position under three or four weeks, and she should be confined even longer if necessary. I cannot enter at greater length into the details of treatment, but I am firmly convinced that if a woman be properly cared for during the month or six weeks after the labor, even in cases of the most extensive injury, nature assisted will so far repair the damage done that the operation would be then rarely needed. I will again refer to this matter when treating of the condition after the sutures have been removed to abort a threatened attack of peritonitis.

When the hemorrhage is unusually great, from tearing of the circular artery at the close of labor, it will add but little towards increasing the danger to the patient by introducing a sufficient number of carbolized silk sutures to close the laceration, and much benefit may result beyond checking the loss of blood. If the direction of the laceration is not clearly defined, its course can be easily indicated by making outward traction from opposite points by means of a tenaculum in each hand. After flexing the limbs over the abdomen the sutures can be generally introduced without difficulty, and often without a speculum, as the uterus lies on the floor of the pelvis and its os at the vaginal outlet. After the introduction of the sutures the uterus should be carefully returned to its position, so far at least as to correct the retroversion.

The reflex symptoms, from which a woman suffers after she has had the cervix lacerated, are strictly due to impaired nutrition, and not to the injury directly. She will suffer from great nervousness, sleeplessness, and irritability of temper, so as sometimes to entirely change her disposition; she may be unable to concentrate her mind on any subject, or to assume responsibility, and may live in dread of some impending misfortune; with this condition she will seldom be free from pain at the back of the head and from fears that she will become insane. As a rule she loses all sexual desire, and unless her love for her husband has been well founded she may

contract a great dislike for him. All of these symptoms, but the last, are often due to some degree of impaired nutrition, or, as it is now fashionably termed, "nervous prostration."

The loss of sexual desire is caused by an injury sustained at the vaginal outlet, which always coexists with a serious laceration of the cervix, and both result from a common cause. The force which rapidly expelled the child from the uterus, also drove it through the vagina so as to rupture the fascial covering to the muscles at the vaginal outlet. From the displacement of the levator ani muscles in the so-called laceration of the perinæum, and the consequent loss of support to the pelvic blood vessels, erection of the tissues becomes often impossible, hence the loss or impairment of sexual desire so often accompanying a patulous ostium vagina, and which continues until the injury has been properly repaired.

When the cervical tissue is very dense, or the injury be found unusually extensive, we may be able to determine upon the necessity for an operation at the first examination. But with a large number of cases this cannot be settled in justice to the woman until she has had the benefit of prolonged local treatment, and until every means has been resorted to for the purpose of improving her general condition.

If after a reasonable time the reflex symptoms have not disappeared, and there has been no improvement in getting rid of the results of the pelvic inflammation, nor in the general condition, we must then resort to the operation, not so much for the purpose of repairing the laceration as to remove a source of irritation, which has resulted from it and by which nutrition has become so far impaired that the process could no longer be properly exercised until the irritative cause be removed. We now come down to a consideration of the gist, and on what, in my experience must rest the necessity for performing the operation in the greater number of cases. Unless more or less dense or cicatricial tissue be found deep in the angles of the tear, and unless it be thoroughly removed, the operation will not benefit the woman; in other words the simple union of the sides of the cleft is useless. When the reflex symptoms have been persistent, and with more or less anæmia, I have never failed to find this tissue, which is as distinct in character, as to density, as a small embedded fibroid, and unless it be removed, experience has taught me that there will be no improvement in the condition of the woman. I have gained the knowledge from experience that it is a foreign body and a source of irritation, and when removed the reflex symptoms and the anæmia will disappear; moreover that involution of the uterus, arrested by the injury, will at once begin and be completed in the usual time, as after labor. These are the simple facts, and the man who denies the truth of them, without an honest investigation, shuts his eyes wilfully to all progress save of his own making.

We cannot always judge by the sense of touch as to the presence of this tissue, for we occasionally meet with cases where the outer tissues are unusually soft, and the dense tissue is only exposed by laying open the angles of the laceration to what we may assume was the original limit of the injury. A pair of strong, sharp, pointed scissors is the best instrument for removing this tissue, which can be drawn up out of its bed by a stout tenaculum, and can be often separated as perfectly as can a leaden bullet which has become embedded in wood. This mass of tissue is always, in shape, wider below, in its relation to the vagina, as if it figured the outline of the rent, which would naturally have been less in depth as it extended upward. We are, therefore, to bear this in mind and work towards the center as if we were removing a portion of a cone, for it might prove a serious procedure to lay open the sides of the uterus above the internal os, to which point we are often obliged to extend the dissection.

Under ordinary circumstances the operation can be best performed by first drawing down the cervix to the vaginal outlet. This manipulation is attended with little risk if it be done slowly and without jerking. The position has the advantage of being at a point where the arteries are placed sufficiently on the stretch to sustain no damage, but by their diminished calibre the pelvic circulation becomes greatly lessened for the time and while the uterus is being held there. We are thus able to control greatly the loss of blood, which would be very great if the operation were performed with the uterus in its usual position.

The great difficulty in the operation is the introduction of the sutures, if they have to be carried to the bottom of a cone-shaped cavity, which, as I have stated, often extends to and above the internal os. It would be impossible to accomplish the introduction properly unless the bottom of the opening were lifted, or drawn forward, the flaps at the same time being separated and rolled back, so as to bring both raw surfaces on nearly a common plane. This is accomplished partially by the drawing down of the uterus; and the rolling out of the flaps must be increased by the aid of tenacula in the hands of the assistants. After the parts have been brought into the most favorable position, the difficulty is often still so great that an expert even cannot accomplish the introduction properly. I have attempted to overcome this difficulty by passing two sutures from within outwards; then placing the loop of one carrying thread within the loop of the other, I draw one thread completely through, making of it a continuous suture, and to this the wire is then attached to be passed in the usual manner. The great difficulty was always with the passage of the needle through the posterior flap so as to bring its point out near the edge of the laceration. From want of space to turn the needle sufficiently, its point must often penetrate so far back in the posterior flap as to enter the peritoneal cavity; or to include within its sweep a portion of the net work of blood vessels, lymphatics, or ganglia, which encircle the cervix about the vaginal junction. One of the assistant surgeons at the Woman's Hospital, Dr. J. D. Emmet, my son, has overcome this difficulty by reversing the method I have just described. His plan is to introduce the two needles from the vaginal surface at such point as he may select, but to enter close to the edge of the flap and come out as near to the track of the canal as possible. This can be done by this method, with some accuracy, as there is sufficient room in the vagina to turn the needle in the proper direction. After the introduction, the two needles are to be cut off and the ends of the threads tied together in a square knot, so that, by drawing one through, the other attached to it becomes a continuous suture includingboth flaps.

This brings me to drawing attention to a very common result obtained after the operation for closing of a lacerated cervix, and one which amounts essentially to a failure. I have known, not infrequently, an operator to express his disappointment at the result obtained by him in some special case, and I have been called into consultation, as if I had been somewhat instrumental into misleading the public as to the benefits which might be gained by the operation. I have been told that the dense tissue had been most carefully removed from the angles, and that there had been no difficulty in the operation, which proved a great success so far at least as bringing about union of the lacerated surfaces. In these cases the union is often perfect, so far as can be seen, and the os like that of a nullipara. But the introduction of the sound shows that only the vaginal tissue had been united, thus leaving a large cavity within which the secretions were retained. The introduction of a bent probe acts as the finger in the cavity of the mouth, with the lips closed, where it can be passed off to the right or to the left at some distance beyond the limit of the os. A sufficiently wide and undenuded strip is always to be left over the centre of each flap to form the uterine canal. Each suture must be brought out at least to the edge of this undenuded strip and no damage will be done if it be carried well beyond. But it is absolutely essential to pass the sutures so as to insure a canal of a uniform and sufficient size, and to unite in apposition every portion of uterine tissue which was involved in the laceration.

A very important and profitable part of my surgical work consists in doing this operation over again where others have failed in gaining the promised result, from a want of attention to detail. On opening up, with a pair of scissors, the large cavity left in many of these cases, it will be found filled with a profuse cervical discharge, which had no ready means of escape and became a source of irritation. The surface which had been denuded at the previous operation will always be found covered by large granulations and never healed. These have all to be removed afresh, the angles properly cleaned out, and the sutures introduced so as to approximate the parts perfectly, and I have frequently seen after the second operation an improvement in the condition of the patient within thirty-six hours, and the result eventually

has shown that the previous failure was not due to the operation, but to the method of executing it.

Where death has occurred after this operation it has generally been from peritonitis, and so far as my personal observation goes, the direct cause has been due to the passage of the sutures into the posterior connective tissues about the vaginal junction, as I have described. The history generally is that the patient wakes up with a chill and pain, which condition alarms the nurse. The operator is called up some time before daylight of the second night, to see his patient suffering from shock, as great as would occur after a crushed limb, and with rise of temperature and rapid pulse. The first glance is sometimes not unlike that presented in the last stages of cholera, when the patient seems literally to be shrinking to death. Not a moment is to be lost, and the woman will certainly die if the sutures are not immediately removed and the parts all thoroughly opened up with the finger, as they were before the sutures were twisted. A hot water vaginal injection should be then given, and care exercised to thoroughly wash out the cavity in the cervix. A pad saturated with glycerine should be placed well up in the cervix and a hot stimulating drink administered to cause increased action of the skin. Within an hour she will be like a different person and in two or three hours more her temperature and pulse will become normal. The after treatment of the local condition must receive the personal attention of the physician. At this stage the appearance of the cervix in these cases is not promising, as the tissues are œdematous, congested, and sloughy. Every few hours the patient must receive the vaginal douches, and for a week or more the physician must use Sim's speculum to expose the cervix, that, with the use of a long nozzle syringe, he may be able to wash out every portion of the cavity.

To insure perfect drainage, strips of iodoform gauze should be passed up into the angles and to the bottom of the wound so that no pouch may remain in which the discharges may accumulate. In other words the case is to be treated surgically as we would treat any other cavity which should heal up from the bottom. When properly treated the results are excellent in these cases, as the woman is relieved entirely of the reflex symptoms from which she suffered, and quite as much as though the operation went to a successful termination. Moreover as the cavity fills up, the cervix is always left soft with a perfectly natural canal. The personal attention necessary in these cases is certainly very exacting, but the results fully compensate. We learn a most important and practical lesson from the experience, for it demonstrates fully that if the same personal attention were given after the occurrence of a serious laceration of the cervix, the greater number of cases would be fully restored.

Therefore, it is necessary to educate the profession to the realization of this responsibility, for it rests with them in the future, by giving more personal attention to the treatment of these injuries, to aid Nature in her disposition to repair. As soon as this is put into practice I believe that gradually the number of lacerations of the cervix, requiring surgical means for restoration, will become greatly reduced.

TYPHOID FEVER.*

BY JOHN L. BRAY, M.D., CHATHAM.

This is a subject that has been written upon until it is about threadbare, and it is not so much with the object of offering any new ideas that I read this paper, as to impress as strongly as possible, particularly on the junior members of the profession, the necessity for vigilance in the management of this disease, as complications arise frequently and often insidiously, calling for their prompt recognition and early treatment, necessitating careful watching and frequent visits.

During the past two or three years it has been my lot to see and treat a large number of cases of enteric fever, and I would just here remark, that I believe as a general thing, too much medicine is given, and not sufficient attention paid to hygienic measures and diet; in this respect the sins of commission are greater than those of omission; that the so-called antiseptics, acids, etc., are not only useless but positively hurtful, as they upset the stomach and disorder digestion, without having any

*Read before the Ontario Medical Association.

curative effect or in anyway cutting short the disease. Another point to which I wish to call your attention is the diagnosis. I hold that an early diagnosis in this disease is almost impossible, particularly in our part of the country, where malaria is prevalent, and I have known cases pronounced typhoid fever on the first visit, which were well in a week, and the physician gets credit for curing or preventing the disease, and this circumstance, I am sorry to say, is taken advantage of by the physician, who thus gets a reputation for cutting short or curing this disease, which he is not slow to take advantage of, and to which you all know he is not entitled. This is not an uncommon occurrence, as to the truth of which some of my confréres here will bear testimony.

When I am called to a case and am not sure whether it is one of malaria or typhoid, I generally give a mild laxative of rhei, hydrarg-submur., and sodæ, followed by from 3 to 5 grain doses of quinine every 3 or 4 hours, and, if the temperature is high, 5 grains of antifebrine every 4 hours. Now if after taking, say from 40 to 60 grains of quinine, the temperature still keeps up, and there is a morning remission, I begin to think I have to deal with a case of typhoid, particularly if we have frontal headache, nose-bleed, a general feeling of malaise, with muscular weakness, and a tendency to diarrhœa. My object in first giving the laxative is to unload the bowels and relieve the liver. Mind I do not purge my patient, but I do believe a laxative such as I have named, by carrying off the poison does a good deal towards promoting recovery. I only give this once. I order my patient to be put in a large well-ventilated room; to lie on a mattress (feather beds which are so common, particularly in the country, are an abomination) to be lightly covered, and have all superfluous furniture, carpets and curtains removed. I then stop quinine and all other medicines (unless occasion arises for their use), and use the sponge bath composed of sodæ-bicarb. or whiskey in tepid water, as I find it is more agreeable to the patient, and just as effective in lowering the temperature as the cold bath, without producing the shock.

When the headache is severe or the head very hot, I apply the ice-bag. Too much stress cannot be placed on the necessity of frequent sponging, when the temperature exceeds 101½ F. Perhaps someone will ask, do you not give any medicine? My reply is no, unless something arises necessitating their use, such as severe diarrhœa, pneumonia, heart-failure, etc. The first and last of these are the more apt to occur. Now my practice is, when the bowels are not moved more than from four to eight times in the twenty-four hours, to let them alone. Should they be looser than this, I would give pepsine, bismuth, and morphia. But if you give peptonised milk only, from the first, I find that you do not have excessive diarrhœa, and it agrees with the stomach; in fact I have seen patients retain this, when everything else was vomited. One great advantage is that no curds form, and you have no fermentation, consequently there is very little or no gas in the stomach and bowels, which you all know is very distressing to the patient. The very moment I see the slightest sign of heart-failure, I give alcohol in some form (the best brandy perferred), and I am guided as to quantity by the condition of the heart. In addition to the alcohol, I generally give, say 5 drops each of tincture strophanthus, digitalis, and nux vomica every 4 hours. When the heart keeps strong throughout, I dispense with these, but in most cases, about the 21st day, I have found it necessary to use stimulants, particularly in patients of 40 or over. When the tongue becomes brown and dry, and sordes form on the gums, alcohol is indicated and must be given. I say must, because I feel strongly on this point, and experience has taught me that it is a necessity if you have to save your patient. I am aware that some of my professional brethren take issue with me on this point; but I am sure the weight of evidence is against them; at any rate a close observation extending over 27 years, has confirmed me in the opinion that nothing heretofore known can supply the place of alcohol when a stimulant is called for in this disease. I care not how much delirium you have, when a patient has a pulse of 140 or over, a tongue so dry that you can break it, and so restless that it takes two or three nurses to control him, then I say pour in the brandy irrespective of everything else. If half an ounce every hour does not lower the pulse and temperature, and relieve the restlessness, give him an ounce, if

that does not do, double the dose, and I will venture to say that in 8 out of 10 cases, if this is persevered in, your patient will rally and tide over the crisis. In one case of this kind, a boy 17 years of age, I gave 16 oz. of brandy every 24 hours for 12 successive days with the happiest results, after all hope of recovery had been given up. This may seem heroic treatment, but my friend Dr. Tye, who saw the patient several times with me, will corroborate my statement as to the marvelous effects of this strong stimulation.

Another point to which I wish to call special attention is this: a time comes in most cases when we have constipation taking the place of previous diarrhœa. Now what are you to do in such cases? Some will say give cathartics, others enemata, and others, and I trust the great majority, will say do nothing, let nature do her work as she will most assuredly do if you let her alone, 99 times out of a 100. It is just at this time, that what I have previously said about vigilance and frequent visits becomes an actual necessity, for your patient is apparently nearly well; no fever, no pain, appetite returning, in fact getting voracious, and he insists on having something to eat besides the slops he has had for 4 or 5 weeks, and he is backed up in this by his friends, who say, why he is half starved, and his bowels must be moved, and urge the doctor to give him some food and physic. Now is the time to assert your authority, and put your foot firmly down. Say to the friends no, his life depends on following directions strictly, and why? Because there is paralysis of the ulcerated intestine, which rest and time will alone remove, and to give either solid food, or purgatives would be to kill your patient, or at least jeopardize his life. No doubt many of you can recall cases such as this. Perhaps in a weak moment you have yielded to the solicitations of friends, and, contrary to your judgment have given a dose of castor oil (the mildest of all purgatives) and your patient has died or had a severe relapse just when you thought he was well. Or perhaps you have not visited your patient as often as you should have done, thinking everything was all right; when in your absence some officious friend has said, oh, his bowels ought to be moved, and has given him something for that purpose, and you are hastily summoned, to find your patient in a state of collapse, and dying from perforation. This is not a fanciful picture but a stern reality, which I have witnessed on more than one occasion. To recapitulate:

1. Be sure of your diagnosis before stating that you have a case of typhoid fever.

2. Give very little medicine, but sponge freely, and give nothing but peptonized milk.

3. Watch your patient closely and pay frequent visits.

4. In case of weak heart, or when stimulants are indicated, give alcohol and give it freely.

5. When constipation occurs due to paralysis of the ulcerated intestines, give no purgatives.

6. Insist on the nurses obeying your orders, norwithstanding the meddlesome interference of others.

Selections.

THE UNITED STATES AND ITS DOCTORS.—There is certainly no more curious social phenomenon than that of the extraordinary popularity of the medical calling in this country as a means of securing a livelihood. The subject is one that is often dwelt upon, but we doubt if many even yet realize the grotesque misproportion which medicine in the United States holds to other bread-winning occupations. Here are some of the naked facts in the matter: France has 38,000,000 of population, 11,995 doctors, while it graduates 624 medical students in one year. Germany has 45,000,000 of population, about thirty thousand doctors, and graduates 935 students in one year. The United States has about sixty million of population, nearly one hundred thousand doctors, 13,091 medical students, and graduates 3,740 students in one year. Germany, which has relatively less than half as many doctors as America, is already groaning over its surplus. When one compares France with this country, the excess of medical men here seems most astonishing. A comparison of the United States with European countries, in whatever way it is made, leads one to think that there is something almost morbid in our medical fecundity.—*Medical Record.*

PRESCRIPTION FOR IRRITABLE BLADDER.—DR. E. L. TUNSTALL recommends the following mixture in cases of irritable bladder:

R. Potassium citrate. . . . 4 drachms.
Fluid extract of triticum repens . . } of each 1 ounce,
Tincture of hyoscyamus }
Fluid extract of buchu . . . ½ "
Water sufficient to make . . 3 ounces.

One teaspoonful in a wineglassful of water three or four times daily.—*Medical Summary.*

KNIFE WOUND OF HEART. By H. M. Pond, M.D. St. Helena, Cal.—Observations bearing upon the immediate effects of wounds which are necessarily fatal, and upon the length of time during which a wound may fail to demonstrate its dangerous character, are of great value to the surgical "expert" on the witness stand, and of interest to medico-legal inquiries generally. For this reason, I consider it not unadvisable to place on record the following case: On April 27th, 1890, Joseph Van W., of Rutherford, Napa Co., Cal., became engaged in a quarrel with a woman, and was stabbed by her. It is impossible to ascertain at just what time in the scuffle the woman stabbed him, but the evidence indicates that the knife blow was the first one struck. They had quite a "mill," time enough for the man to knock her down two or three times, when he suddenly turned and ran out on the street and up the road. The woman followed him hotly, but seeing he was rapidly gaining on her, she turned and went back. He ran about one hundred yards and fell, lying where he fell until he died. His groans were heard by the neighbors for half an hour before it was discovered that he was seriously hurt, and he died just as he was found. The autopsy, made next day, revealed a knife wound directly through the sternum into the right auricle, the pericardium and right pleura being full of blood. The history of the case indicates that the receipt of the blow did not attract his attention, as he continued his fight, in which he seemed to have the upper hand, until probably the weakness induced by his hemorrhage led him to run. Even then he had strength enough to outrun the woman, and go at least one hundred yards before he fell.—*Pacific Medical Journal.*

PRESENCE OF MERCURY IN A TAPE-WORM COMING FROM A SYPHILITIC PATIENT UNDER MERCURIAL TREATMENT.—A butcher boy treated at Brême and at Gottingen, by mercurial inunctions, having passed two scolices per anum, was treated with male fern, which caused the evacuation of two tænias (mediocanellatà), whose grey coloration caused the presence of mercury to be suspected. Chemical analysis having demonstrated that such was really the case, microscopical examination gave the following result: Treated with glycerine, each proglottis showed the metallic deposit in the vas deferens, in some of the vasa efferentia, and in the vesiculæ seminales. It was so pronounced in the oviduct that even to the naked eye it presented the appearance of a dark streak. The vagina looked like a dark tube, although on section the narrowed calibre was still found to exist. The walls of the uterus also contained a certain quantity, while the ovary itself was quite free. After staining by means of eosine and other coloring matters, longitudinal and transverse sections revealed the fact that the entire parenchyma of the tænia contained particles of mercury, equally distributed. On the integument these were collected principally in the grooves or depressions, which was particularly the case in the neighborhood of the suckers; to the naked eye the head of the worm seemed blackish. Previous observations had already drawn attention to the dark color of the head in certain tape-worms, but this was due to a granular pigment deposited in the cellular tissue, and bearing no resemblance to the mercurial deposit mentioned above as being present in the external tegument of the head of the tænia. In the same way it cannot be mistaken for the collections of pigment, which Leuckart has noticed in the vagina, since he has himself stated that these collections were found only in old proglottides, while those found in the Gottingen case were situated in young and living proglottides. The remarkable part of this observation is the enormous amount of mercury absorbed by these parasites without having any appreciable influence on their vitality; with the exception of the grey coloration, microscopical examination did not reveal any difference from the parasites found in healthy animals.—*Le Moniteur du Praticien March, 1890.—Lyon Medical, June 8th.*

THE

Canadian Practitioner

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TORONTO, AUGUST 1, 1890.

THE UNIVERSITY OF TORONTO AND TRINITY MEDICAL COLLEGE.

We publish in this issue a letter from Dr. Bingham, of Cannington, with comments on certain editorials that have recently appeared in THE PRACTITIONER. We quite appreciate his devotion to his Dean, whom he esteems so highly. It happens that the Senate of the University of Toronto also valued very highly the work of the Dean and Faculty of Trinity Medical College. If our correspondent will take the trouble to read carefully our account of the negotiations which took place, he will easily learn this. Toronto University felt that its superior advantages in science should be placed within the reach of all students in every Faculty as far as possible, and made the most friendly offers to Trinity. These offers were rather contemptuously declined. The Dean went so far as to state that these members of the Senate who were making such advances were simply setting "traps," and acting with "utter meanness and gross unfairness," etc. Does our correspondent really think that the circumstances of the case justified such methods of abuse on the part of Trinity's Dean?

Dr. Bingham tells us what he and his brother graduates are going to do. We object not to their loyalty. Let them rally around their alma mater if they will; but let them remember at the same time that while they are supporting Trinity, it is not necessary nor friendly to try to destroy Toronto. We may say that he need not presume to speak for all the ex-students of Trinity, as if they were going to join in this bitter attack on Toronto. We have in our possession a letter received from a graduate of Trinity, who attended lectures with Dr. Bingham, which contains the following words: "Allow me to say that I am in hearty sympathy with the editorial of THE CANADIAN PRACTITIONER, entitled, 'Trinity Medical College and the University of Toronto.' I regard the establishment of the Medical Faculty of the University of Toronto as the most important step towards higher medical education that has ever been brought about in Canada." Many graduates of Trinity have spoken to us in a similar strain, and of such no inconsiderable number can be found in Toronto.

The reasons advanced, so far as we understand them, are chiefly two.

1. The facilities for teaching science in the University of Toronto are unsurpassed on this continent, and probably in the world. Trinity in refusing to derive its share of profit from these undoubted advantages made a grave mistake, as a large proportion of her friends easily perceive. If she is determined to have none of them, it would be grossly unreasonable to prevent others from plucking the rich ripe fruit that is brought to our very doors

2. The new Medical Faculty is governed by a perfectly disinterested body—the Committee of the Senate on the Medical Faculty, being the Hon. Edward Blake, the Chancellor; Mr. Wm. Mulock, the Vice-Chancellor; Sir Daniel Wilson, Judge Falconbridge, Dr. O'Sullivan, Rev. Principal Caven, Judge Boyd, and Professor Loudon —while many, if not most, medical schools in Canada are controlled by their proprietors, whose interests frequently induce them to attract large numbers rather than maintain a high standard. Without making reference to any particular colleges, we may say that the history of medical education on this continent shows that the system of private proprietory schools has furnished many examples of mills that were simply a disgrace to the nineteenth century.

Will our correspondent pardon us if we advise him to take a broad view of the case? Let him forget the "personalities" of the wicked and unappreciative, and consider what is best in the interests of medical students, whether of Trinity or Toronto, and scientific medical education.

If those facilities for teaching science, which we used to cross the ocean to seek, are brought to our hands, let us all take advantage of them. The work of obstruction to progress in any line is always unfortunate and unprofitable, and we hope that all of Trinity's friends will soon take a proper view of the work that has been undertaken by the Senate of the University of Toronto in the interests of higher medical education.

GONORRHŒA AND ITS SEQUELÆ.

The general public have little or no idea of the disastrous consequences which result from gonorrhœa. It is sometimes considered rather a joke when a male gets "caught" with an ordinary clap, as it is called. If it be "cured" in a few weeks, it is thought to be a thing of the past, trifling in its nature, though it caused considerable inconvenience and pain for the time being. There may be a slight gleet, which is generally considered a considerable nuisance, but not a very serious matter. Such a condition is, however, a very serious one indeed, and the consequences are pretty well known to the profession, though perhaps not always appreciated to the fullest extent. The most serious of these arise from the urethral stricture, which follows in a large proportion of cases, and are cystitis, pyelitis, and serious lesions of the kidneys. These results may be delayed for many years, and are apt to become most troublesome at an age when the vital energies are becoming impaired, and consequently less able to resist them. In an old man a stricture with a cystitis, causing him to spend a goodly portion of his time during night and day in his efforts to force his stinking ammonical urine through a canal that is almost closed, is accompanied by an amount of suffering that is simply indescribable. On account of such serious results connected with the sequelæ it has been stated by some that gonorrhœa causes a greater amount of evil to the human race than syphilis. In answer to this, we may say that such a statement is absurd when it is considered that syphilis causes not only suffering to the patient, but serious evils to his descendants for many generations.

Unfortunately, as we are learning during the last few years, the evils resulting from gonorrhœa in males are by no means confined to the men who are simply paying the penalties for the follies of youth. Their wives in a large number of cases have to become the innocent sufferers. Some years ago Nœggerath surprised the medical world by the statement that more than half the women of New York were suffering from disease resulting from gonorrhœa. Such disease is frequently caused by the husband, who formerly had one or more attacks of clap which had been *cured*. The usual course of events in the female is vaginitis, endometritis, salpingitis, and peritonitis, with frequent purulent formations. Recent abdominal surgery has done much to prove that Nœggerath was nearly, if not absolutely correct. It is inexpressibly sad to see a healthy, happy girl, who becomes a loving and faithful wife, changed from such causes in a few years to a hopeless chronic invalid.

The lesson to be learned by the profession is obvious. Always consider gonorrhœa as one of the most serious of all diseases. The physician is frequently, if not generally, handicapped by the secrecy which surrounds the case, and often prevents that rest which is indispensable in treatment. One is terribly nonplussed in certain cases, and it would probably be much better frequently to throw aside the secrecy, to some extent at least, but as a rule this must not be done without the patient's consent. We are not going to discuss treatment, but in a general way would say—put your patient in bed at once and cure him as thoroughly and as quickly as possible.

THE PREVENTION OF POST-PARTUM HEMORRHAGE.

At the recent meeting of the Ontario Medical Association, the address on obstetrics was delivered by Dr. Çarson, of Toronto, who took as his subject the prevention of post-partum hemorrhage. We regret that the address was not written, and we are unable, therefore, to give it to our readers. It unfortunately happened that the doctor was in a poor condition physically on account of the ravages of la grippe; but, notwithstanding such drawbacks, he was able to state his views with an amount of vigour and

clearness of description that commanded the undivided attention of all present. We are deeply indebted to the "Dublin School" for our modern views on this very important subject, and this country has seen no more able exponent of that distinguished "school" than Dr. Carson.

The main contention of the speaker was that we should carefully watch the symptoms in the patient, and especially the condition of the uterus, without being "meddlesome." He is entirely opposed to the too early removal of the placenta, and attached considerable importance to the formation of clots in the uterine sinuses, which, to some extent, prevent hemorrhage. We are inclined to think that these clots have little to do with such prevention, and consider that we must rely mainly on the entire closure of the sinuses by uterine contractions to check bleeding. It is hard to say exactly how long we should wait before making any efforts to express the placenta, but there is nothing to be gained by unnecessary haste. A slight period of rest appears to come in the natural course of events after the expulsion of the child, and hasty interference with this rest is unnecessary, if not injurious.

The speaker insisted that at this period the patient should be kept perfectly quiet, and condemned what he called "unnecessary kneading or manipulation of the uterus." There is probably an amount of vigour shown by many practitioners in this kneading process which does no good, and produces considerable suffering. And yet, call it what you will—kneading or otherwise, this is one of the critical periods in the history of labor when the educated finger-tips have their important work to do. If any one in the audience got the impression from the address that this was a matter of but little importance, he learned his mistake when Dr. Carson made some explanations touching this point in his admirable reply at the close of the discussion. It is simply a matter of knowing how to properly "follow down" the uterus during the expulsion of the child, and "watch" it until the completion of the third stage. When one has learned this important lesson in a practical way, he is in a condition to prevent post-partum hemorrhage, excepting in a small minority of cases.

NOTES.

ONTARIO MEDICAL LIBRARY ASSOCIATION.—At the third annual meeting of the Association the following officers were elected: President, Dr. J. E. Graham; Vice-Presidents, Drs. A. A. Macdonald, Temple, and Moore of Brockville; Treasurer, Dr. McPhedran; Secretary, Dr. James MacCallum; Curator, Dr. N. A. Powell; Assistant Curator, Dr. Wishart; Trustees, Drs. R. A. Pyne, Britton, and Pepler. During the year the number of volumes in the library has been doubled. The Association enters on its new year free from debt, and with assets of $5,545.50. Fifty-six medical journals are regularly on file. Arrangements have been made by which city physicians, or those residing at a distance, may take books from the library for a week at a time. Duplicate copies of various journals have come into the possession of the Association. These will be gladly exchanged with Physicians who may wish to complete their sets.

Meeting of Medical Societies.

THE PATHOLOGICAL SOCIETY OF TORONTO.

The president, Dr. Reeve, in the chair.

The following specimens, with histories, were presented by T. K. Holmes, M.D., of Chatham.

CONCEROUS UTERUS: REMOVAL BY VAGINAL HYSTERECTOMY—RECOVERY.

Mrs. C., æt. 55, the mother of several children. About nine months before I saw her she began to have menorrhagia; this growing worse, she consulted Dr. Jenner, of Kingsville, who discovered the nature of the disease and at whose suggestion I saw her. Dr. McGraw, of Detroit, who has seen her, coincided with Dr. Jenner. On Dec. 7th, 1889, assisted by Drs. Jenner, Campau, and Dewar, and Mr. Pearson, I removed the uterus through the vagina. The operation was done in the usual manner, except that I was unable to draw the uterus down on account of the fragile nature of the diseased cervix, and was obliged, therefore, to perform the first part of the operation *in situ*. Clamps were used, instead of ligatures, to control the vessels of the broad ligaments. There were no enlarged lymphatic glands to be felt anywhere.

She made a good recovery under the skilful attention of Dr. Jenner, and has regained her former weight and feels and looks well.

VESICAL CALCULI.

S. Y., æt. 48, for about four years an English R. R. Station Agent. Has had gradually increasing vesical irritation. Has been examined by several surgeons, who, not detecting a calculus, have variously diagnosed prostatic abscess, stricture, albuminuria, enlarged prostrate, cystitis. When he came under my care he had lost forty pounds in weight, had a sallow complexion, a very pained look, and was obliged to urinate every ten or fifteen minutes. The vesical tenesmus at the end of urination was so great as to cause an involuntary discharge from the bowels at intervals. The urine, strongly ammoniacal, contained much mucus and pus; the appetite was poor; the temperature varied from 100° to 102° F.; the pulse was never below 100 (generally 120). His urine had never contained blood, so far as he was aware. What seemed to be a greatly enlarged prostate could be felt per rectum, and slight pressure there caused intense suffering. I learned that various means had been tried to cure the cystitis, and as I was unable to pass a sound on account of the pain produced by the attempt, I determined to make an incision into the bladder and remove any foreign body, if found, or drain that viscus if none existed. As soon as complete anæsthesia was produced, the sound revealed the truth, and as the stones seemed numerous, I deemed it safer to cut than to crush, and accordingly made a median incision, and without difficulty removed the thirteen calculi here exhibited. The nuclei are composed of uric acid, and the remainder of amorphous phosphates. The patient made a good recovery.

CANCER OF THE UTERUS—AMPUTATION OF CERVIX—IMPROVEMENT—DEATH FROM RECURRENCE OF DISEASE.

Mrs. T. H. N., æt. 39 years, married and has had five children and four miscarriages. Had lead poisoning, and never fully recovered her former strength. First noticed that menses was unusually profuse about August, 1887, but did not consult anyone till June 11th, 1888, when I saw her and discovered the nature of the disease. The cervix was large, nodular and hard, and bled profusely. The organ was not firmly fixed, but the inguinal lymphatic glands were enlarged. After amputation of the cervix in the usual way, she improved very much during the next seven months, regaining her former weight and being free from discomfort. The disease recurred in the stump in March, 1889, and she gradually failed, with the usual symptoms of pain, hemorrhage and fetid discharges, and died September 27th, 1889.

MALIGNANT TUMOR OF THE LABIUM.

Mrs. R., æt. 55, of good family history, and no suspicion of specific taint, consulted me on September 14th, 1889. She has had a large family of healthy children, and no serious difficulty in any of her labors. She suffers from asthma and has vesicular emphysema. Fourteen months ago she noticed a small indurated spot on the right labium near the junction of the skin and mucous membrane, and this induration has spread until the whole surface from the anterior commissure to the middle of the perinæum is involved, and several spots of pale ulceration exist on the cutaneous surface, and also on the mucous surface of the lower part of the vagina. No enlarged glands could be detected anywhere, and the patient had a good appetite, was well nourished and suffered but little pain. The diseased mass was removed on October 18th, 1889, and necessitated an incision six inches long, the wound being of an elliptical shape, three and a half inches wide in the widest part. It extended from a point near the clitoris to the middle of the perineum, and included the lower part of the vagina on the right side. The wound healed readily, and the patient is well.

DEGENERATE KIDNEY WITH SUPPURATING CAVITIES AND CALCULUS,

Mrs. G., æt. 73. Seven years ago she noticed an enlargement, the size of an orange, on the right side of the abdomen on a level with the umbilicus. It grew gradually but gave little pain or discomfort until a year ago, when it began to hurt her to lie on her right side. For three years she has noticed, at intervals of a week or two, a discharge of a teaspoonful of pus from the bladder after urinating and standing up. During the last ten weeks she has passed thick pus with her urine every day.

The quantity of urine is about a pint daily, the specific gravity 102·6, and the reaction acid. There is no pain about the bladder or urethra, and she can retain her urine as long as she could when she was well. The tumor now extends from the lower border of the ribs to the anterior superior spinous process of the ilium, and from the dorsal region to the median line in front. It is moderately hard, smooth, somewhat tender, and only slightly movable. From the date of my first visit on the 28th of March, she gradually failed, having pain, fever, and night sweating until she died on July 10th, 1888. About a week before death there was a free discharge of pus from the bowels. The autopsy showed the kidney to be large, smooth and regular in form, and adherent to the under surface of the liver, the ascending colon, and indeed to all tissues with which it was in contact. The pelvis was large and suppurating, and contained an irregular shaped calculus which weighed 180 grains. There were several pus cavities near the surface of the organ, and one of these communicated with the ascending colon by an opening as large as a pencil. The inside of the bladder presented no gross appearance of disease, but its walls were very easily torn. She was opposed to any operative interference, for which her age and general condition were unfavorable.

DEGENERATION OF BOTH OVARIES—RAPID GROWTH AND SUDDEN DEATH.

Mrs. C. S., æt. 35, married and has had three children; good family history. Was well until six weeks before I saw her, when she noticed an enlargement in the region of right ovary, but did not consult any physician until four weeks later when Dr. Bell, of Merlin, was called. At his suggestion, I saw the case a few days subsequently. I found a well defined tumor of the right ovary, which seemed smooth and uniform in shape, quite soft, and gave a sense of fluctuation. It extended beyond the median line, and rose two or three inches above the umbilicus. Her temperature at the time of my visit was 102° F., her pulse 120, and she was weak and anæmic, so that it was deemed prudent to postpone surgical interference until her condition could be improved by general treatment. At the end of a week she was free from fever, her appetite was better, and her strength somewhat improved. This was Thursday, and it was decided that I should see her early the following week and perform abdominal section. On Saturday, however, she became suddenly very weak, her extremities cold and her heart so feeble that her family became alarmed, and sent in haste for Dr. Bell. She died before night. At the autopsy the right ovary was found to weigh ten pounds. It was semi-solid, smooth, had a small pedicle, and on being cut open was found to contain numerous small cysts in a soft reddish succulent stroma. The whole was friable, and even the more solid parts were infiltrated with a greenish colored serous fluid. There was about a quart of fluid in the peritoneal cavity. The left ovary weighed half a pound, having begun to undergo the same kind of degeneration. No cause could be discovered in the abdominal or pelvic cavities for the sudden collapse and death.

UNUSUAL ARRANGEMENT OF THE BRANCHES OF THE AORTIC ARCH.

Dr. Primrose showed a dissection of the great vessels arising from the arch of the aorta, which exhibited the following peculiarities: The first branch arising from the arch was a common trunk, one-half of an inch in length, which bifurcated in front of the trachea into the two common carotid arteries. The two carotid arteries, after gaining the outer side of the trachea, on the right and left sides respectively, continued upwards in normal relation to the air-tube and the other structures at the root of the neck. The second branch arising from the arch was the left subclavian; arising one-half inch from the origin of the first branch, it passed upwards to the outer side of the left common carotid artery, but lying on a plane posterior to that vessel. The vertebral artery arose from the subclavian, one and a quarter inches from the origin of the latter vessel. The subsequent course of the subclavian artery and its branches of distribution were normal; the left pneumogastric nerve passed in front of the artery to cross the aortic arch. The third branch from the aortic arch arose one-half inch from the origin of the left subclavian. It was the last of the great vessels arising from the arch. The two vessels last described arose from the superior portion of the arch, whilst the right subclavian arose from the posterior aspect of that

vessel. The artery then coursed upwards and to the right, crossing the spinal column and the longus colli muscles obliquely, lying behind the trachea and œsophagus; the artery then lay on the right side of the trachea, between it and the right longus colli muscle, it then passed outwards behind the scalenus anticus muscle and occupied its normal position, crossing over the first rib. The vertebral artery was the first branch given off, and the other branches of the artery were normal in course and origin. The left vagus nerve crossed over the aortic arch, and its recurrent laryngeal branch ascended behind the arch and crossed over the anterior aspect of the right subclavian artery in its course to the larynx. The right inferior laryngeal nerve passed directly from the vagus to the larynx without running behind the right subclavian artery, and was therefore not recurrent.

HYDROCELE.

Dr. Cameron presented a specimen of a hydrocele sac, which he had excised from a young man who had received an injury in boyhood, and who had been the subject of recurrent effusions into the tunica vaginalis ever since. There was no pain so long as the sac was full of fluid; great pain when the sac was empty. There were two distinct portions of the sac; the specimen has been dissected by Dr. Primrose.

Dr. Primrose said he had made a partial dissection of the sac. The division of the tumor into two portions, mentioned by Dr. Cameron, was due to a constriction caused by a firm fibrous ring. The explanation of the condition is probably as follows: Originally, the hydrocele was covered by a complete fibrous tunic composed of the normal coverings of the testicle; as the hydrocele increased in size a hernia of the tunica vaginalis occurred through its fibrous covering, or, at all events, through a portion of the fibrous layer. The opening in the fibrous layer, through which the tunica vaginalis had passed, enlarged somewhat, and the margins of the opening thickened and thus formed a constricting band dividing the hydrocele, as it increased in size, into two distinct portions. The thickened ring of fibrous tissue has been dissected out and is well seen in the specimen. A very significant fact supporting this view is, that the portion of the tumor representing the herniated part of the tunica vaginalis possesses a very thin covering, whilst the portion of the hydrocele above is enveloped still by a firm fibrous covering. If this explanation of the condition be a correct one, then we can understand the formation of those hydroceles which appear to be multilocular cysts, but which an introduction of the cannula prove to be composed of a single sac constricted in the middle.

Dr. H. A. Macallum presented a

TUMOR OF THE BRAIN.

J. H, æt. 16, weight 75 lbs. This history dates his illness back to June, 1889. It began with severe pain in head and vomiting. This continued more or less severe till a few days before his entrance into the London Hospital (Nov. 1st). He then became stupid and dizzy. When seen in the ward by the attending physician he appeared dull, and complained of double vision, pain in the head, dizziness, and sleeplessness. Temperature normal. Before January he lost vision in left eye; the loss was accompanied by paralysis of the sixth cranial nerve on same side. After January right eye became blind, followed by paralysis of the left facial nerve. No loss of motion or sensation in limbs occurred. Liver enlarged and tender. Died March 13th. *Post mortem* on March 13th. Liver, lung, and kidneys were very much congested; brain presented a tumor (a round celled sarcoma), involving the pons and pressing upon and obliterating the left half of the cere bellum.

Dr. W. J. Burt presented an

ODONTOME.

The patient from whom I removed this specimen was a young man, to whom I gave ether in a dentist's office, for the purpose of removal of his teeth. The first and second molars on the right side were drawn. The wisdom tooth on that side had not yet appeared. Two months after removal of the teeth an opening took place in the cheek, opposite where the second molar had been. The neck was frequently lanced below, and in front of the first opening. After the opening, a portion of the jaw from which the molars were removed, presented a necrosed condition, and it was thought nature would cast it off in course of time.

However, as the time passed by for a natural separation, instead of becoming loose, the denuded portion was firmly fixed and increased in size, presenting the appearance of a small walnut. It was then that I advised its removal. The patient willingly consented, as the fistulous opening was a constant source of annoyance to a rising young man. Ether was given and the growth, after a couple of taps with a chisel, was readily turned out with a pair of forceps. The fistulous opening closed almost immediately. Some little time after this the patient again consulted me for what he thought was a return of the growth at the site of removal, when I discovered a tooth presenting, quite roughened, and which was most probably the wisdom tooth, exactly opposite the scar on his cheek. Shortly after its appearance it began to decay, and although it is now a number of years since, he refuses to have the root removed, as he says the jaw is quite weak. The body of this tooth has decayed to the gums and has apparently been very large. You will observe the portion of the growth attached to the jaw or tooth presents a honey-combed appearance, as if removed from the cusps. To all appearances, it enveloped the top of the tooth, and whether the margin was attached to the alveolar process, I am not prepared to say, but it has the appearance and the description that some pathologists give of an odontome and which is considered a rarity.

PRIMARY SARCOMA OF THE LEFT KIDNEY.

This specimen was removed from a child 18 months old. The mother first noticed something wrong with the child when it was a year old, and shortly afterwards a lump appeared in the left lumbar region of a hard consistence. It gradually increased in size, filling the space between the crest and the lower rib, and eventually the whole of the left side of the abdominal cavity. Ascites gradually developed, the fluid being very dark-colored. The urine contains at times a slight amount of albumen and pus corpuscles. The kidney weighed 44 ounces; all the other organs were normal. The father had been an invalid for several years, and died only a few months before the child. He had suffered from a psoas abscess, Bright's disease, and pleuro-pneumonia, a large abscess cavity forming ultimately in one of the lungs.

ACRANIA AND TRIPLETS.

I have attended three cases of acrania, all very similar; only one of the specimens I will present. Hydramnios was present in all; in one case very profuse. All the children lived a short time. I have nothing to say in reference to these cases except that, in addition to the many causes given for the over-production of liquor amnii, I cannot help but think that a portion of the fluid in these cases is cerebro-spinal. In one case there had evidently been a large meningeal tumor which shewed evidence of a recent rupture of the membranes, which were noticed lying in loose folds on the head, and then we know how rapidly cerebro-spinal fluid is produced, *e.g.*, in cases of spina bifida. It is well known from the history of these cases that a pint will be reproduced after tapping in a very short time. Then, again, the functions of the cerebro-spinal and amniotic fluids are in some respects, at least, similar. If rupture of the meninges takes place during pregnancy there will then be an intermingling of the fluids within the membranes of the liquor amnii. In these cases too, when rupture does not take place there seems to be nothing to prevent the intermingling of the fluids by osmosis. The analyst and microscopist will no doubt set a matter of this kind at rest. As a contrast to this specimen, I beg to present you with a card of triplets. These children were born Nov. 19th, 1886, and weighed at birth 8, 7½, and 6 lbs., respectively. Although this specimen does not appear to have a pathological bearing, I believe most of these cases have a pathological influence. Even with twins, one is frequently born dead; and in the case of triplets, I believe that there can be but few specimens produced, such as the specimens I now present you. Dr. Omstein, of Athens, Greece, is at present actively engaged in collecting information regarding the longevity of triplets. In the case of triplets, quadruplets, quintuplets, etc., multiple fœtation means certain death to one or all the children. The children spoken of to-night are still alive and healthy, and have every appearance of living as long as any single birth.

PAGET'S DISEASE.

This specimen was removed from an unmarried woman, æt. 40. Eleven years ago she began to complain of her left breast becoming swollen

and painful at times. A lump appeared between the breast and axilla shortly afterwards. This enlargement disappeared; but as it did so, the breast became harder. About two years ago the nipple became excoriated; scabs would form and peel off. All about the nipple became sore and the excoriation was spreading upwards. A thick, whitish matter exuded from the nipple, and continued to do so until its removal. Breast very painful most of the time since the appearance of the eczematous condition. There has been no return of the trouble since the removal, and the patient has improved generally since the operation.

Hospital Reports.

AMPUTATION OF THE CERVIX FOR MALIGNANT DISEASE.

UNDER THE CARE OF J. ALGERNON TEMPLE, M.D., IN THE TORONTO GENERAL HOSPITAL.

Mrs. H., aged 55, mother of ten children, came to the Toronto General Hospital on June 27th, suffering from cancer of uterus. She is a large, stout, healthy-looking woman, having always enjoyed good health, and with no family history of cancer. She passed the climateric period some years ago. In February, 1890, she noticed a thin, watery, bloody discharge, not offensive, and unaccompanied by pain; this continued up to the early part of June, when she consulted her physician concerning it. He diagnosed cancer, and sent her to the hospital for operation. On examination, it was found that the posterior lip of the cervix and cervical canal were pretty completely destroyed, the uterus was fixed so that it was absolutely impossible to draw it down. One could not detect any enlarged pelvic glands, and it was difficult to satisfy oneself whether or not the fixed condition of the uterus were due to extension of the disease into the surrounding tissues, or to a previous attack of inflammation; however, this fixed state of the uterus decided one against vaginal hysterectomy, and it was deemed advisable to remove the whole of the diseased mass by removing the whole cervix as far as the internal os.

The patient being under chloroform the cervix was seized with a vulsellum forceps, and a circular incision made through the vaginal mucous membrane at its junction with the cervix, and then, by means of the finger, the cervix was pushed back as far as possible with a pair of curved scissors, the anterior wall of the cervix was cut through, just above the os internum; this was repeated on the posterior wall, thus removing the whole of the cervix as far as the os internum, by a gothic-shaped incision, the apex being upwards. The hemorrhage was very considerable, and it was necessary to leave in four pairs of long handled clip forceps for forty-eight hours. The after treatment consisted in the use of antiseptic vaginal douches several times a day. The patient left the hospital two weeks after the operation. It is too early to speculate concerning the subsequent history of this case. The operation is one, however, well suited for those cases in which vaginal hysterectomy is inapplicable.

ALCOHOLIC PERIPHERAL NEURITIS.

A CASE UNDER THE CARE OF A. M'PHEDRAN, M.B., IN THE TORONTO GENERAL HOSPITAL.

Reported by W. N. Barnhart, Clinical Clerk.

G. A., æt. 40, engineer, has always been healthy, but has been addicted to alcoholic excesses since 25 years of age. One-third of a pint of whiskey has been his daily ration, and one quart from Saturday night till Monday morning. Never sleeps very soundly, is easily awakened, and often lies awake more than half the night. About the 24th of May last, while taking his usual Sunday spree, he lost his appetite for food. This had often occurred before, but when he would take more whiskey his appetite for food would return. This time he vomited the food as soon as taken. He called in a physician who ordered milk and limewater and forbade whiskey. The milk and limewater was well tolerated for three or four days, when he resumed solid food. His friends recommended him to take some whiskey and not break off too suddenly. He took a little, not much, contrary to medical advice. Six days after onset and while his stomach was retaining food very well, he became very wild and delirious. He was tearing the bed-clothes and had to be kept in bed by force. He was sent to the hospital in the night, remained there a week, and was strapped to the bed for the first three days. When he got up to go about, his hands and feet

felt very numb. This was thought to be a result of the straps. But the numbness gradually became worse. He went home and resumed his labor—running a stationary engine. The work was light and he continued at it for two or three weeks, but was much annoyed with dull pains in his arms and legs, soreness of his muscles, feeling of pins and needles in hands and feet, and general weakness. He was obliged to give up work, not from weakness of his hands, as handling the shovel and most of his work was done by the flexors of hand, which were not much affected, but because his feet became so tender that he was unable to walk about. He returned to the hospital June 30th, was examined carefully. Both hands were weak, right slightly more than left. Extensors were much weaker than flexors, the latter appeared very little affected. He presented markedly the wrist-drop appearance of lead-poisoning. Could not perform any delicate movements with fingers, could not write his name or pick up a small article like a pin or small coin from a smooth surface. Muscular actions, like buttoning his coat or pulling off his socks, were performed very awkwardly and with difficulty. Had also paresis of muscles of legs, especially tibialis anticus, extensor proprius pollicis, and extensor communis digitorum. Could not flex the foot upon the leg or extend the toes very well. Foot could be extended all right. There was quite marked incoordination of muscles of lower extremity. Patient could not stand on one foot. Could not stand with eyes closed without swaying. He said he had to sit down when he wiped his face with a towel.

Common tactile sensation is very little disturbed. There is some hyperæsthesia and hyperalgesia, especially of feet. Warm water appeared hot when applied to feet. Pain is felt when feet are touched. Feet were sore and painful while he was walking about, and seemed as if his shoes were too tight, which was not the case. There was a feeling of pins and needles in hands and feet. A sensation of strain in calf muscles while standing. Pains and soreness are worse as night approaches. Could not elicit special tenderness along nerve trunks. Muscles of legs and arms are soft and flabby. He complains also of swelling of hands, feet, and ankles. Kneejerk absent in both legs. Plantar, cremaster, and abdominal reflexes absent. Sphincters normal. Pupillary reflexes normal. *Electric phenomena.* Faradaic irritability still retained. Galvanic current:—An. S C—K S C.

Although there was no loss of faradaic irritability, yet there were changed galvanic reactions, showing a degeneration of some fibres.

This man has now improved very much and will soon be able to resume work. The treatment consisted simply in quietude in bed, good food, with stomachic tonics at first, and later general and nervine tonics.

Remarks by Dr. McPhedran: The case presents quite typically the phenomena of a mild attack of alcoholic multiple neuritis, or "alcoholic pseudo-tabes." The disease is comparatively rare in the male, for some unexplained reason, being much more frequent in the female. Memory is usually much affected and the mental condition "muddled."

It is only in rare exceptions that *post mortem* examinations are obtained, as the disease is seldom fatal, but in those examined, the nerves, especially the radial, and anterior tibial, are found to have undergone a sabacute inflammatory process. Naked-eye appearances are usually normal, but on microscopic examinations, evidences of degeneration are found, as well as, more or less interstitial neuritis. The lower limbs suffer most, and oftenest as a rule, but occasionally the neuritis may be confined to other nerve tracts as the respiratory, the brachial plexus, etc. If the arms are much affected there is a striking resemblance to lead palsy.

GONORRHŒAL RHEUMATISM.

UNDER THE CARE OF A. PRIMROSE, M.B., C.M., EDIN., IN THE TORONTO GENERAL HOSPITAL.

F. L., æt. 29, single, a farmer, admitted July 1st, 1890, complaining of an inflamed and painful wrist-joint; the following history was taken by Mr. W. N. Barnhart, the clinical clerk:—On Tuesday morning, June 9th, when the patient awoke he noticed his left-hand fingers and wrist very much swollen, but felt no pain. He remained in this condition for two weeks; then pain commenced in the hand and fingers, occasionally shooting up to the elbow. The pain is worse at night and keeps him awake. He has

also had an acute pleurisy on left side, which set in two days before the swelling in the hand. The pleurisy ran quite a mild and favorable course.

Present condition, July 11th.—Fingers, hand, and wrist swollen, red, and hot; pain felt chiefly at ulnar side of carpus and dorsum of hand; fingers semi-flexed: almost no movement. The hand is useless, and he carries it in a sling.

Several members of the patient's family have had rheumatism; as to his habits, he is a hard worker winter and summer; smokes tobacco, drinks beer, occasionally to excess. He has previously enjoyed good health; had gonorrhœa a few weeks ago; urethral discharges commenced on 20th May and lasted ten days; there has been no recurrence. The diagnosis of gonorrhœal rheumatism was made, and the treatment employed has been pot. iodide et tr. cinchona co, internally; lin. sap. co. lin. iod., aa., applied locally, hand bandaged in cotton wool.

Remarks.—Gonorrhœal rheumatism attacks the foot or the knee with greater frequency than the joints of the upper extremity. The joint affection usually manifests itself within a few weeks of the recurrence of the urethritis; some authors, however, state that the attack may be postponed for some months after the contraction of the gonorrhœa. In the case just narrated, the œdema of the tissues about the wrist and hand was considerable; the acute stage of the disease had subsided to a great extent when the patient presented himself at the hospital; the urethral discharge had closed and the pain had diminished. Under the treatment employed in hospital, the pain disappeared entirely and the swelling slightly decreased. There still exists, however, considerable swelling, and there is tenderness on movement at the joint. The amount of movement at the wrist is very limited, but there has been very marked improvement in this during the last ten days. It is questionable whether the treatment advocated, of putting a limb so affected on a splint, is beneficial or not; it would be well during the acute stage of the affection to fix the joint and secure complete rest in this manner, but when all acute symptoms have passed off, it seems more reasonable to encourage a certain amount of movement; these joints are very apt to become permanently stiff; fibrous anchylosis frequently occurs, and absolute fixation on a splint would tend to encourage it. In the case we have described, the joint was carefully encased in cotton wool and the arm carried in a sling.

The term gonorrhœal rheumatism is a bad one; the connection of the disease with rheumatism is a doubtful one, except, perhaps, the fact that it occurs most frequently in individuals of a rheumatic diathesis. Further, a similar joint affection has been observed apart from gonorrhœal urethritis; it appears to follow a simple urethritis occasionally, and has supervened on the irritation of the urethra by the passage of bougies; the term, "urethral arthritis," has been suggested by Howard Marsh, as a more suitable one.

Correspondence.

Editor of CANADIAN PRACTITIONER:

DEAR SIR,—I have read carefully some recent editorials in your journal, and a letter in reply by Dean Geikie. Will you kindly grant me space sufficient to make a few remarks in reference thereto?

The personalities made use of in your editorials, no doubt thoughtlessly and in a moment of irritation, are surely to be regretted. The members of our profession will certainly resent such attacks upon a man who has devoted his lifetime and life's energies to the advancement of medical education in the Dominion, and who has grown grey in the services of the profession, not to speak of the fact that he is at the head of a college occupying the proud position of Trinity, and which so many of our profession are proud to know as our *alma mater*. Such methods of debate will, I assure you, only induce the friends of Trinity to draw more closely together and to rally more enthusiastically for the struggle against injustice and unequal rights.

In your latest editorial you say: "Surely no one will contend that our great universities in all parts of the world are to absolutely close their doors to all young men who commence the study of law, engineering, agriculture, or medicine."

Now, I contend that the circumstances of every country must largely govern its political economy and that you should confine yourself, in this discussion, wholly to our own Dominion.

Secondly, I wish to contend that, owing to the circumstances of our country, the professions of law and medicine do not occupy the same relation to our subsidized universities as do the professions of engineering and agriculture. Engineering should be aided by public funds because the profession is not over-crowded. There is a very poor field comparatively, as yet, for engineers in Canada. So with farming. We are a farming country, and scientific farming is a desideratum which is very much needed and very loudly called for, and every farmer who can be induced to study agriculture scientifically is a clear gain to Canada. Not so with law and medicine. These professions are greatly over-crowded, and besides, it has been proven that the educational requirements in each case can be fully supplied by independent colleges without any public assistance. To the reflecting mind, it is surely very erratic logic which endeavors to prove that the government of a country should be called upon to supply a demand which does not exist; that the public funds should be used to furnish an article which is not only in demand but is actually a glut in the market.

Now please do not misunderstand me. When I speak of this article, the supply of which is immeasurably in excess of the demand, I refer, not to the half-educated young physician, but to the graduate who has been thoroughly and scientifically trained.

Now, let us admit for the moment, that public subsidizing is a necessity for the advancing of medical education in our Dominion, and in the light of that admission, let us consider, briefly, the existing condition of affairs. You say in a recent editorial: "If she (Trinity) recognizes the great advantages of the chemical and biological departments of the University, why does she not show a willingness to participate in the benefits to be derived therefrom? They have been offered to her; we believe they are still free to her."

It is not my custom, nor is it now my intention, to accuse a gentleman whose opinions may be at variance with my own, of wilful misrepresentation; yet, to my mind, it is simply inexplicable, that you, who must understand so well the present status of affairs, should so represent it in the statement just quoted from your editorial.

In the annual calendar of the medical faculty of Toronto University, which I have before me, I read the names of certain teachers whom we were in the habit of considering as members of the Arts and Science departments of our Provincial University, and who, as such are certainly salaried by the State; and yet they are represented in the Medical Calendar as members of the medical faculty. This calendar is sent to intending medical students all over Canada, in order to show them the supposed advantages possessed by this medical faculty over all other teaching institutions of a simllar kind. And yet, "these advantages are free to Trinity"! Yes, forsooth, if she is willing to surrender her students to a competing rival, and certainly not otherwise. By what exclusive right are the names of these *province-paid* gentlemen who teach biology, etc., in our *Provincial* University, paraded upon the list of one particular medical faculty? Why has not Trinity an equal right, if right it be at all? Why cannot Trinity say to her students, "The schools of Science and Biology are open to all students of Medicine, and all are taught there upon equal terms *and by professors who, being paid by the Province, have no connection whatever with any medical faculty*"?

Suppose a student of Trinity, or of any independent college, desired to take advantage of the *supposed* Provincial institution, as at present constituted, his name would at once be added to the list of students of the Medical department of Toronto University, an institution competing actively for patronage with the independent college at which it was his desire and intention to pursue his purely medical studies. Moreover, I find that the fees which this supposed student would pay for instruction in these *truly Provincial* institutions, would go, not to the gentleman who taught him (they are paid by the public funds), but directly into the coffers of the medical faculty.

Now, I ask you, in all candor, is this not a fair statement of fact? And yet, "these advantages are free to Trinity"! I am willing to leave that statement to the unprejudiced reflection of the members of our profession and of all fair-minded and honorable gentlemen.

H. S. BINGHAM.

Cannington, July 5th, 1890.

Faculty of Medicine, McGill College,
Montreal, 22nd July, 1890.

Editor of CANADIAN PRACTITIONER:

DEAR SIR,—My attention has been called to an editorial in your latest number, headed "Puffing Extraordinary," in which the Medical Faculty of McGill College is accused of undignified puffing and advertising. I have not seen any of the articles to which you refer, nor have I any knowledge of the source from which they come, but I can answer for the fact that they are neither authorized nor desired by this faculty, and I trust you will do us the justice to believe that undignified or unseemly methods of advertising are as distasteful to us as they can possibly be to yourselves.

Yours very truly,
ROBERT CRAIK, M.D.,
Dean.

CLUB PRACTICE.

Editor of CANADIAN PRACTITIONER.

SIR,—Within about as many months, there have been four different expressions from professional sources, all strongly condemnatory of the vicious practice of club custom or "contract doctoring."

The first was an editorial in THE CANADIAN PRACTITIONER for 1st February last, page 68. You have there said truly that "the general tendency is to degrade the profession." Not only does it degrade the profession in a dozen ways, but it also completely demoralizes the laity as to any proper response for services.

The second expression of condemnation was in the annual address of the President of the Ontario Medical Association, published in your pages for 1st July, page 296.

The third was in the report of the Committee on Ethics of the same Association. After condemning the practice of flagrant advertising, it proceeds in the same tone (evidently putting both on a level) to say :—"It also begs to report concerning the unsatisfactory state of the profession regarding 'club practice.' That it still continues to as great a degree as at any time is not denied. This committee considers that it must again put on record its still unchanged opinion that it is a form of practice most injurious to the medical profession at large, and attended by those who take part in it with loss of dignity and status as physicians among the people with whom they are thus brought in contact."

The fourth was a motion of censure or expulsion from the Ontario Register brought up at the late meeting of the Ontario Council. It was dropped *pro tem.* because supposed to be *ultra vires.*

These several expressions all point one way, namely, that the profession is aroused and incensed at that part of it which degrades the body as a whole. If loud advertising has been and is tabooed still, then this is tabooed also and to the same extent. In fact, the Ontario Medical Association should not acknowledge as member any one who accepts club practice. A move to that end will be made next year in all likelihood.

GALEN.

Book Notices.

A Textbook of Obstetrics, including the Pathology and Therapeutics of the Puerperal State. By Dr. F. Winckel, Professor of Gynæcology, and Director of the Royal Hospital for Women, member of the Faculty of Medicine in the University of Munich, etc. Translated by J. Clifton Edgar, A.M., M.A., Adjunct Professor of Obstetrics in the Medical Department of the University of New York. Philadelphia: P. Blackiston, Son & Co.

Dr. Winckel is well-known as one of Germany's most distinguished obstetricians. Probably no one has had a richer clinical field in this department than the author, during his experience of thirty years in maternity hospitals and private practice. He also had the benefit of the records of his father and grandfather. He has given us essentially the views of German obstetricians, and has made his description of the pathology and management of labor prominent features in his book. The morbid anatomy of puerperal septicæmia is fully and minutely described. His remarks on abdominal sections, especially for cases of extra-uterine pregnancy, show that he is not fully in accord with modern ideas on this subject. He condemns abdominal sections under such circumstances as being too dangerous, and recommends, instead, electricity and the injection of narcotics into the sac. In the treatment of eclampsia he favors chloroform and chloral, and simply refers to morphine as a

remedy which has been used by others with probably good results.

Taken as a whole the work is a valuable addition to the literature of this subject. For the purposes of the student there are books, such as those of Playfair and Gallabin, which will always be more popular; but for the general practitioner, who wishes to get a broad knowledge of obstetrics, Winckel's textbook will be found very useful and instructive.

Pamphlets Received.

Brooklyn Health Exhibition, reprinted from the *Sanitarian*.

Influenza, eine Geschichtliche Med. Klinische Studié. Von Dr. Kusnezow, und Dr. F. L. Hennaun.

L'Intoxication Chronique par la morphine, et ses diverses formes. Par le Dr. Régnier, Paris, *Bureau du Progrés Médical.*

Fever, Thermotaxis, and Calorimetry of Malarial Fever. By Isaac Ott, M.D., Ex-Fellow in Biology, Johns Hopkins University.

Personal.

DR. ZWICK (Tor. '90), has settled in Rixboro.

DR. MILLER, of Hamilton, has gone to Europe for a well-earned holiday.

AMONG the latest who have left Toronto for Great Britain, are Doctors Grasett and Spragge.

DR. C. J. MCNAMARA, of Walkerton (Tor. '89), has gone to Regina, where he intends to practise.

DR. JOHN WEBSTER, of Toronto, has been appointed Assistant Physician at the Kingston Asylum for the Insane.

DR. J. H. RICHARDSON, of Toronto, is enjoying his summer vacation on one of the Georgian Bay's beautiful islands.

DR. H. B. BAKER, Secretary of the Michigan State Board of Health, has had the honorary degree of A.M. conferred upon him by the State University.

DR. J. FOSTER has been removed from the Kingston to the Hamilton Asylum, where he succeeds Dr. Faircloth, who has resigned.

THE Department of Normal and Pathological Histology in the Woman's Medical College of Toronto has been placed under the charge of Dr. G. Acheson. He will be assisted by Dr. S. P. Boyle and Dr. E. J. Irvine, as Demonstrators.

DR. H. F. LYSTER, of Detroit, has resigned the chair in Medicine at the University of Michigan, owing to the fact that the Regents have decided that the occupant of this chair must reside in Ann Arbor. There is a salary of $2,500 attached to the chair. Dr. J. N. Martin continues to hold the chair in Obstetrics in this institution. An innovation is made in the delivering of a course of lectures on the diseases of the skin, by Dr. W. F. Breakey, of Ann Arbor. After 1893 the University of Michigan will require a four years' course.

DR. INGERSOLL OLMSTED (Tor. '87), has been appointed Medical Superintendent of the Hamilton General Hospital. There were nearly thirty applicants for the position, and among them were many thoroughly well qualified; but the general opinion prevails that the appointment of Dr. Olmsted is an excellent one. Things have not been very smooth for some time in this hospital, but we can see no reason why a judicious executive officer should not make the crooked ways straight. We hope and believe that Dr. Olmsted will be found the right man in the right place.

WE learn from a letter of Dr. Osler's, published in the *New York Medical Journal*, that in the latter part of May he and Professor Ramsay Wright were at Freiburg, which is situated in the southwestern end of the Black Forest in Germany. It has a university and hospital which attracts students from all parts of Germany. From another source we have learned that Professors Osler and Wright, after *doing* pretty thoroughly the German Universities, remained some time in Paris, and started for London July 5th. There will be a general gathering of the Canadian clans at the meeting of the British Medical Association in Birmingham. From thence they will go to the Berlin Congress.

PROFESSOR HENRY MONTGOMERY, who was at one time lecturer on zoology in the Toronto School of Medicine, left Canada about eight years ago and went to Grand Forks, where he was a professor in the science department of the University of Dakota. About a year ago he resigned his position in Grand Forks, and became connected with the Normal School of Cortland, New York, as Professor of the Natural Sciences. He has recently been appointed to the chair of geology and natural history in the University of Deseret, the territorial University of Utah, in Salt Lake City. This University, although comparatively young, is one of the most flourishing institutions of the west. Professor Montgomery's salary will be larger than any he has previously received, and his associations in his new home are likely to be very pleasant. We have to congratulate our friend, who is one of Canada's most gifted sons, upon his success.

Obituary.

DR. W. T. O'REILLY, of Toronto, one of the inspectors of prisons and charities of Ontario, died in Kingston, July 12th, at the age of fifty-six. He was seized with apoplexy on the preceding day, and never regained consciousness before his death. This was his second attack, his first having occurred some two years ago. Although not engaged in the practice of medicine, he took a deep interest in the profession, and was highly respected by its members.

Births, Marriages, and Deaths.

BIRTHS.

NEWBURN.—On July 1st, 1890, at Lethbridge, N.W.T., Canada, the wife of Dr. F. Hamilton Newburn, of a daughter.

MARRIAGES.

FREEMAN—CARGILL.—At Cargill, on July 16th, by the Rev. D. Campbell, assisted by Dr. James, W. F. Freeman, M.D., Walkerton, to Carlotta J., eldest daughter of H. Cargill, Esq., M.P. No cards.

BAINES—TROUGHTON.—At the Church of St. David, Exeter, Devonshire, England, on Tuesday, July 22nd, by the Rev. J. T. Toye, Allen Baines, M.D., C.M., of Toronto, to Ella, only daughter of the late G. Kempenfeldt Troughton, of Topsham, Devonshire.

Miscellaneous.

The Alvarenga prize, of the College of Physicians of Philadelphia, consisting of one year's income of the bequest of the late Senor Alvarenga, of Lisbon, has been awarded to Dr. R. W. Philip, of the Victoria Dispensary for Consumption and Diseases of the Chest, Edinburgh, for his essay on Pulmonary Tuberculosis, which will be published by the College.

At the American Neurological Association, Dr. Dercum, of Philadelphia, presented a case of paraplegia, in a man of fifty-eight, which was relieved by trepanning the vertebræ. A portion of the dura mater, found to be considerably thickened, was removed, after which the man speedily regained the use of his limbs, sensation was restored, and his condition generally improved.

Dr. Prevost, Cambremer, Calvados, France, says: I tried Aletris Cordial in the case of a young lady, twenty years of age, who, for the last seven years, ever since she attained the age of puberty, had been most irregular in her periods. Sometimes her periods occur at intervals of four months, sonetimes three, and at others six. Eventually she came to consult me, and I prescribed Aletris Cordial, having already used it in another case with very good results. She is very much better.

GOING FAST.—Hood used to tell a story of a hypochondriac, who was in the habit, two or three times a week, of believing himself dying. On a certain occasion he was taken ill with one of his terrors while riding out in his gig, and happening at the time to see in the road ahead his family physician riding in his carriage in the same direction, he applied the whip to his horse to overtake the old doctor as soon as he possibly could. The doctor, however, seeing him coming, applied the whip to his own horse, and as he had a nag that was considered a "goer," they had a close time of it for about three miles. But the hypochondriac, driving a faster horse, finally came alongside of the doctor, and exclaimed, "Hang it, doctor, pull up—pull up instantly. I am dying." "I think you are," cried the doctor; "I never saw anyone going so fast."—*Tor. Sat. Night.*

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

☞ Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, AUGUST 16, 1890.

Original Communications.

HERNIA.

BY HON. M. SULLIVAN, M.D., KINGSTON.

Read before the Ontario Medical Association.

GENTLEMEN,—The founders of this Association could not, in their collective wisdom, have devised any scheme more practically useful, more solidifying and beneficial to their society, than that which gives to its chief executive officer the privilege of naming a member to prepare a paper on some subject which shall be discussed in each section, and associating with him a few others who will give the subject more than passing attention. In obedience to that call, I have the honor to appear before you this evening. After recovering from the surprise incident to such a nomination, which I could only attribute to the President's tenderness of heart, I felt it my duty to bow without hesitation to his will and pleasure; not so much for the honor done me, but mainly because I realized the many great advantages of this mode of discussion to the rank and file of the profession. I felt that to that hard-worked and often ill-requited individual, termed the "General Practitioner," with but little time to read and less time to experiment, it was a great boon—enabling him to record and utilize a vast amount of experience; to analyse and test various theories; stimulating him to careful and accurate observation; finally, enabling him to rise from the dull level of routine and monotony to the higher plane of active progress and philosophic thought.

The selection of as ubject next gave me no small amount of perplexity. On reflection, the absence of any written record of my work was painfully impressed on my mind, and caused me to select some general practical subject. Thirty-five years had elapsed since I first entered, with, I hope, due respect, the Temple of Hygeia, and, taking a retrospective glance over so long a period spent in the varied field of general practice, I found many subjects which had left more or less impression on my mind, affording, it is true, very little scope for the imagination, yet which could not fail to interest those so numerously represented here to-day, who are going, or will go, over much the same territory as I have.

Now, gentlemen, hernia appeared to me one of those subjects on which I might venture to address you; one which did not need so much original work to commend it, which is of general interest, and which, by its frequency, and sometimes sudden emergency, demands correct, concise, and clear information, followed by prompt, decided action.

To go over the whole subject would be a fruitless and unnecessary task. I will only, therefore, select such points as experience has impressed most deeply on my memory, and the depth of which impressions are, I feel, the best tests of their utility and importance. Previous to doing so, I may remark that no subject can claim higher antiquity than that of hernia. Its

origin is cœval with the enforcement of the edict dooming man to labor; and to no time, nor to any race, was exemption granted from the natural defects or weakness of structure incident to the development and growth of certain parts of the body. The frequency of it among us is well known. The nature of the occupations of the great mass of our people render them singularly liable to it, and there is not one of my hearers who has not had some experience and can contribute some information to the general discussion. I regret that, owing to the meagre nature of our vital statistics, I cannot give any exact figures. I searched the latest volume published by the Legislature of the Province containing the record of deaths and their causes, but did not even find the name mentioned. The American census of 1880 shows that of the total deaths, one in every 600 was due to it; and of 1236 deaths from it, 141 occurred in children under one year. Kingdon gives some statistics of its frequency in England; one in eight of all the inhabitants were affected with it; and in some districts, as high as one in five. He adds, 41 per cent. were under 31 years of age and 59 per cent. over it. These figures show how very frequent it is. I think all will admit that Canada could, in this respect, compete successfully with these countries.

The first point I shall notice is that of its anatomy. What could the examiners on surgical anatomy do without "the course and coverings of hernia,"—its canals, orifices, fasciæ, ligaments, triangles, vessels, relations, etc. It seems heretical to say a word against it, and if practically learned, my remarks would not apply; but when committed to memory from books, it acts as a powerful deterrent to operation; when that time arrives the details become jumbled together, engender doubt and indecision, instead of confidence and resource; delay results, and delay in many cases means death.

It ought to be impressed on the student that he will not see these, in order that he need not look for them; that skin, superficial fascia, and another membrane, being divided, will bring him to the sac. How astonished one is, after seeing his first operation of cutting down on the sac of, say, an inguinal hernia, at the difference between the ideal and the reality!

No one has done more in this Province to encourage the study of anatomy than I; but not from books. Experience tells me it cannot be too strongly impressed on the mind of the newly ordained, that they will never see these tissues in the order named; that no importance need be attached to them. The different varieties, with perhaps one exception, excite no recollection of special merit; one, however, demands a passing notice. I saw it first described in Birkett's very valuable article on hernia, in Holmes' surgery; and when I was examiner to the Ontario Medical Council, I gave a question on it more than once, without receiving, on any occasion, an intelligent answer. I allude to that form of inguinal hernia which occurs sometimes in young adults, and which is due to the non or partial closure of the tunica vaginalis. Sometimes it drops into what is called the funicular portion, and sometimes into the scrotal. Anyone who examines many cadavers will, if he look, be struck with the frequency of this incomplete closure. The differential diagnosis is given in few terms, namely: It occurs in young adults; its form is globular, compared with the pyriform shape of the acquired variety. Sometimes it has an hour-glass constriction. The testis may be felt or it may not. Practically, its recognition, as I have had reason to verify, is of great consequence. The reasons being, 1st, because the constitutional symptoms ensuing are more severe; 2nd, it is more easily strangulated; and 3rd, it requires prompt liberation, else a fatal termination may be dreaded. It is capable of radical cure much more certainly, and eludes the taxis more readily than any other form. Another reason which makes me bring it so prominently before you, and which I have not seen noticed anywhere, is its recognition in medico-legal cases. To illustrate: A man in Kingston a few years ago, while walking along the street one night, fell into an open drain; he fell on the edge of a plank, the whole force of the fall coming on the perinæum and inflicting a severe contused wound in that region. The wound healed well, leaving no evidence of permanent damage. Fortunately for the man, he discovered an inguinal hernia, and "was positive it was not there before, and was caused by the fall." He brought suit

against the corporation, and his surgical attendant swore that it was caused by the fall. (His chances for fees depended on the plaintiff gaining the suit; only a coincidence, however). I was called for the defence and testified that I did not believe it was due to the blow received on the perinæum; but because I could not assert that it was impossible that it could be so caused, the man gained his suit and recovered large damages. Now, had I been fully aware of this form of hernia into the vaginal process, and its sometimes sudden appearance in young men, I would have had no difficulty in explaining the nature of it, and asserting the impossibility of the plaintiff's having been caused by the fall; thus exposing what I believed then and now to be a gross fraud and injustice. In actions for damages, it is well to be aware of this form of hernia; and I submit to the meeting the question of the possibility of the sudden appearance of a hernia, the result of injury unattended by wound. Is it possible? Can hernia occur in this way? Another point, which occurs to me as appropriate, is the subject of trusses. A friend of mine, the subject of a hernia, wished to obtain a perfect one when on a visit to Paris. When the maker learned where he had come from, he told him his best trusses were American, that he would do much better at home. Notwithstanding, anyone who has had any experience in this matter cannot fail to lament the difficulty of obtaining a proper truss. For the wealthy, it is not so bad; they can have proper measurements made; and after fitting by an instrument maker, have the endorsation of the surgeon. Unfortunately, the victims of rupture are more often ruptured financially; they are sent or must go to the nearest druggist, who has a small stock of cheap ones on hand. He is sure to make a fit, whether it will or not. Now, so great a grievance do I feel this truss matter to be, that I venture to ask thus publicly the members of this learned body, if they realize the evil as I do, to bring the influence of this society to bear on the Government of this wealthy Province to secure a grant of a small amount to the public hospitals, whereby, on the certificate of a surgeon of good standing, a well-fitting truss might either be sold at a cheap rate, or given free, to those unfortunate sufferers. If this paper only aids in removing so great a grievance, I will be richly rewarded, and I solicit your opinion in the discussion which will follow.

It will, I think, be readily conceded that the truss, when it does cure, does not do so by any special power, nor by exciting inflammation of an adhesive character; but by keeping the parts free from causes that will prevent the natural tendency to close going on uninterruptedly. Mr. Bryant, of New York, recommends for the ruptured three trusses, one to be worn during the day, another at night, and one for the bath. It is all important to the young that nature should not be thwarted by badly-made and badly-fitting trusses. It is still the safest, surest and most permanent radical cure we possess. The occupation of the patient must influence the surgeon largely. When applied he should inspect it closely, to see that it fulfils the indications required; that it supports the whole canal, particularly the point of emergence and some distance beyond it; the pad should be firm, flat or slightly convex; the spring, elastic, firm—all bosses or protuberances are very justly condemned. Finally, let me direct your attention to the indifference shown by the general practitioner in this matter. After diagnosing the hernia, he says, "Oh, you must get a truss forthwith," sending him to a druggist or some instrument maker. Now this is very unfair to our patients and ourselves; the surgeon should treat it with the respect and concern due to so serious an affliction. He ought to procure the necessary appliances, see that they fit properly, and have them adjusted from time to time, and obtain a fee worthy of so much trouble and anxiety; and his patients will remember his efforts with gratitude. I speak of this for the section wherein I reside; I may not refer to others.

Next in order and deeply impressed on "the tablets of my memory" is the condition of strangulation, the operation for the relief of which, partly from the old bug-bear of the peritoneum and partly from a vivid recollection of the awful amount of anatomy, was held *in terrorem*; its difficulties magnified to an extraordinary extent; a danger to be dreaded and put off as long as possible; instead of a salutary resource in which safety only required prompt action in seeking it. The symptoms are well

marked. The patient is watched closely; vomited matter carefully scrutinised; any justification, no matter how slight, for delay seized on; taxis tried again and again; at last when the patient is dissatisfied or the attendant alarmed, a consultation is called. Again a trial is made and the operation is had recourse to, with results such as might easily have been avoided: bruised, inflamed, and gangrenous contents, and death from shock and peritonites soon follows. I have had over fifty cases of strangulated hernia on which I operated; the mortality amounting to not less than twelve, and all (with one exception of death from hemorrhage) from delay again and again. I have been called in to assume or share responsibility which I should not, and really, I submit, there ought to be some relief from this, and I would like to have your opinion. What rule has the consultant for guidance in such cases? A practitioner of large practice and good reputation, after keeping a patient, the subject of strangulation, suffering for several days, or even one day, trying from time to time taxis, at the urgent solicitation of friends, and finding the symptoms alarming, calls in a surgeon; the latter, after examining, finds the case in a dangerous state, and at once recommends the only possible chance, viz., the long delayed operation; he is requested to operate, does so skilfully, but the patient dies; his death has been caused by delay and the misapplied taxis, and the blame is at once promptly transferred to the operator. Surgery is injured, and the attendant goes scot-free. This has happened to me on more than three occasions. It is not fair, and the ethics of surgery should admit of some reparation to the unfortunate operator, who, in the goodness of his heart, is made to shield the real transgressor. Is there any remedy?

No, gentlemen, surgery has not, as yet, freed itself from the opprobrium of the great mortality in strangulated hernia, and nowhere can this fact be enunciated with more force and hope of benefit than from this hall. The cases I have found requiring prompt operation, beyond any other, are those where a reducible omental hernia becomes suddenly strangulated; you may be sure a knuckle of intestine has descended by the side of it into the sac, and perhaps hides it effectually from observation. I have seen four cases of this kind; a remarkable one with fatal results occurred near me a short time ago. The other serious cases are where the bowel drops into an unobliterated vaginal process. Another fact I have noticed: that although the symptoms generally occur in regular order, and are well marked, yet it will prove a fatal mistake to always wait for them. I have a vivid recollection of four cases, one a late medical friend of Belleville, where death occurred after operation, the bowel being almost gangrenous. There was no distress, little pain, slight tenderness on pressure, and no vomiting. We cannot, whether young or old, have too indelibly impressed on our memory the necessity for prompt action, when summoned to relieve an incarcerated hernia. Our line of conduct, as laid down by the unanimous and positive assertion of the most experienced masters in surgery, is simple, clear, and free from any risk; nowhere should our duty be more strictly defined or more fully rewarded. Moreover, being one of those affections that may challenge one suddenly without any notice, it behooves us to be ready; only be satisfied that the hernia is strangulated, even if the symptoms are not well marked; they are a hypodermic injection of morphia, ; inversion of the body; sometimes an enema; taxis for 10 or 15 minutes; if choloform be used with the taxis, the operation should follow. The 10 or 15 minutes trial should satisfy anyone. I would allow no man to try the taxis unless previous to operating. If the patient insists on delay, we are freed from responsibility. Acting thus, mortality would be greatly diminished and surgery vindicated. Always, says the great Desault, "think well of a strangulated hernia where taxis has not been employed." A medical friend said to me a few days ago, "I never saw an operation for strangulated hernia succeed," a significant remark. It will be unnecessary to say anything about the details of so well known an operation; I may only remark that in making the first incision it is better to make a free one; it should be so made as to fully expose the point of emergence from the abdomen, so that subsequently we have no trouble, seeing all the steps of the operation, and particularly the deeper ones. The presence of the sac is readily made apparent. The condition of its contents suggests to me a point for your opinion; of course,

careful examination is always made of the contents of the sac; occasionally, with every precaution, doubt will arise. Now, some assert that when in doubt the abdominal cavity is the best place for restoration of the bowel, and most authorities say it ought to be replaced there. I venture to dissent from this view, for the reason that I complied with it on two occasions, yielding to the majority of those present at the operations, and both cases terminated fatally. I could not help feeling that had I freed all constrictions and left it within the ring, accessible, I could, after some hours, have acted with certainty.

A warm antiseptic, sponge or napkin, would compensate for the restoration benefit; and if vitality were impaired too much, we will be able to form an artificial anus, which might admit of future repair. Should the contents be gangrenous, omentum can be dealt with promptly and effectively, viz., by transfixion, ligature and section. If bowel, excision and intestinal anastimoses are before us. To the ordinary practitioner this will be found too difficult and should be consigned to the experienced hospital surgeon. The family physician does his duty, and does it well, when he forms an artificial opening; this he can readily do, leaving to subsequent operation the excision. Another point for your adoption or reverse is this: should we go further, and on all occasions of operation for strangulated hernia attempt a radical cure? Leading surgeons in this country cordially recommend a trial; it is, they say, the most favorable time and should not be allowed to pass, as it adds little or nothing to the risk of operating, and is a favorable opportunity not to be lost sight of. Much will depend of course on the nature of the hernia, and other circumstances carefully considered,

An important and so far undecided question is, the part the peritonsal supports of the intestines take in the causation of hernia. From the time of Scarpa, many writers on surgery and authorities such as Cloquet, Cooper, Malquigne, Birkett, and others, refer to it as an important factor. I have failed to find anything positive and definite; no evidence that a long mesentery predisposes more than a short one.

A friend has drawn my attention to a review of three very elaborate lectures recently delivered by Mr. Lockwood, before the Royal College of Surgeons, England. He investigated with great care 100 subjects, from 5 weeks to 89 years of age, and made a series of examinations in each case, to ascertain the length, the height and range of motion of the mesentery. He gives some singular and not generally known facts. He recalls the existence of the muscle, first discovered by Freitz in 1853, viz., the suspensory muscle of the duodenum, best seen in the child, attached not only to the duodenum, but also conducted by the superior mesenteric artery to the support of the small intestine.

From his examinations, the mesentery at 2 years is $\frac{1}{5}$ length of the body; at 10 years, $\frac{1}{7}$; at 40, $\frac{1}{8}$, and remains so until the end of life. Not one of the hundred had a mesentery so short as to absolutely prevent rupture. Its average length was $7\frac{1}{2}$ inches. Some had as long as 8 or 10 inches. The mesentery in age glides down to left side. The right segment is always longer after 50 years than the left, and at this period of life, left, right, and double hernia, are equal in number. He does not think the mesentery plays an important part in causation. The congenital are best adapted for operation, precisely those best adapted for cure by support.

The age of 45 marks a turning point in medical cure cases, after that being unfavorable. In describing the operation he lays great stress on transfixion previous to ligature and section as an essential proceeding.

And now, gentlemen, my intention was to conclude here, and I would certainly do so had I not been told that you would experience some disappointment, and my review be very incomplete, if I failed to make some reference to the various methods of permanent cure, now being advised by so many surgeons at home and here. Watson says, "that where you find a great many remedies for any disease, you may be sure that it is very difficult to cure, and no one of them will do so." If the parallel holds good in surgery, then the radical cure of hernia is a most difficult and uncertain one.

In no department of surgery have so many operations been devised, ancient, mediæval, and modern surgery; each has its record, and a list alone would fill a volume, and show that more labor, skill, dexterity and ingenuity have been

spent to overcome this than any other difficulty, and I look with confidence to that combination of qualities possessed by the Canadian surgeon to evolve a simple method, which will secure the long looked-for prize, viz., an effectual radical cure. Not long after I began practice, invagination was in vogue ; Gerdy, Wutzer, Rothmund and Wood, of London, I recollect as operators, and were sanguine enough to believe they succeeded. My experience of invagination is confined to one case. The late Dr. Dickson had another previously. We failed, and thus ended my experience of radical cure. Many tried it, and, as now with the open method, asserted their success ; but Mr. Kingdon, of the London Truss Society, demolished their pretensions one after another by the stern logic of facts, and men who were reported as successful examples of the radical cure were fitted by him with trusses. Time has proved the truth of its failure, and I fear invagination is soon to be relegated to the capacious storehouse of obsolete operations.

Antiseptics came ; it stimulated to an unparalleled degree all surgery, operative and otherwise, chiefly abdominal ; the sanctity of the peritoneum was invaded, and became obedient to the general law. It need not be wondered that radical cure again revived.

Mr. Birkett says that the objects to be effected are, closure of the abdominal opening ; obliteration of the sac ; strengthening the abdominal wall on the track through which it passes; improved tone of the peritoneal ligaments of the viscera ; and unless "it completely and perfectly effects these ends, it must certainly fail sooner or later." Hence, one after another, operations have failed, and now all closed methods, as I said, are condemned. But this in no wise dampened the ardor of the progressive surgeon, and at no time has there been so many workers, with clearer notions, strong in their determination to secure success.

Before noting the operations in detail, and reviewing the position and prospects of the operation down to date, I should mention the injection plan attributed to a Mr. Heaton, of Boston. It consists in causing union and solidification by injecting subcutaneously into and around the whole length of the sac a solution, of which oak bark decoction is the main ingredient. Those who have seen the effects of hypodermic injections of morphia can readily understand it ; how it hardens, condenses and unites the tissues. It promised well for a time, having been kept secret for some years. It has the merit of easy performance, and, it appears to me, ought to act well in children ; but it is invisible, has not found favor with surgeons of repute, and is not likely to grow in favor and become a standard operation.

All recognised modes of operation now in vogue, and worthy of notice, have many points in common ; the essential feature of all is the ligation and obliteration of the sac, and it is worthy of remark, they have been more successful in the practice of the designers of the operation than in that of those who repeated them.

The principal operations in Great Britain and Ireland are those of Banks, Ball, and McEwen ; for details of these and many others, you can consult a very valuable retrospect of surgery, published by a leading surgeon of Montreal, Dr. Shepherd. I will only take a very rapid review of them. Banks ligates the sac as high up as possible after cleanly dissecting it out, ties and cuts off omentum, sutures the pillars with silver wire, and caves them in. He recommends a light truss. He followed 66 cases, 44 were successful, 7 only partially so. McEwen, who obtains the remarkable score of one failure, and not one death in 65 cases, dissects off the sac, sometimes cuts it off, and sometimes leaves it; when left, puckers it up to form a boss or bulwark to support the opening ; frees the opening around the margin of the inner ring with the finger, then close the canal by stitching conj. tendon and Poupart's ligament ; drains the wound ; keeps patient in bed six weeks. The first dressing is done at the end of the second week. It would undoubtedly require an experienced surgeon with every appliance at his command. His American imitators assert that nothing like his success can be obtained by them.

Ball, of Dublin, isolates the sac, empties it, carefully applies torsion four or five times, ligates high up, then sutures skin twisted part and pillars. Torsion is the great feature he relies on.

As might be expected, American surgeons have exercised their extraordinary skill, fertility of resources, and inventive genius, on many occasions to achieve success in this operation.

Bryant, of Bellevue, with admirable dexterity, dissects off the sac, and weaves it in plaits with the pillars of the ring.

Another operation by McBurney, of St. Luke's, New York, is worth mentioning. He submitted an account of it last February, with 38 cases, nearly all successful. He cuts down, raises the sac, separates adhesions, if existing, carefully removes contents, opens it, pushes his finger in the ring; ligates with catgut even with abdominal peritoneum, letting the ligature slip off his finger, ensuring absence of contents; cuts off to allow secure stump to hold ligatures; then with 4 to 6 sutures binds skin, fascia, external oblique, conj. tendon, same on the other side; packs the wound with iodoform gauze; puts in tension sutures with pledgets of iodoform gauze; stitches, and if need, drains scrotal wound; puts on package of gauze and cotton, secures tightly with bandage, leaves it two weeks, and after six weeks expects a solid scar support. Plaster of Paris is used with children, coated with shellac, and draws off the urine for the first few days.

In the discussion which followed, Stimson, Gerster, Abbe, Hartley, Syms, Kein, and others, strongly commended the operation, and gave it marked preference over McEwen's or Ball's. No truss is employed; he thinks it might interfere with development of scar. It is easy of performance. Dr. Gibney stated he had seen fewer patients with returns come to his hospital after Mr. McBurney's than any other operation. In addition to those I have given, we have the operations of Stokes, who opens the sac, stitches canal and pillars, leaving the sac in position; Alexander, of Liverpool, who ligates sac, flush with peritoneum; divides the neck, leaves sac in and does not suture the pillars. Annandale ties the sac, cuts it away, and stitches the opening. McCormac endorses Alexander's method. Many others might be mentioned with slight differences; they are all on the same principle. Since writing the above, I had the good fortune to meet in the *New York Record*, of last week, a paper on the subject of radical cure, read before the Surgical Association, at Washington, on the 15th of May last, by the eminent surgeon, Dr. W. T. Bull, of New York. Nothing could better illustrate the merits and standing of the operation than this does. It epitomizes a large amount of labor, and gives what, in considering this subject, one would wish to have, to enable him to form an honest opinion, viz., a large number of different cases, operated on by an experienced surgeon, with every facility and aids to success at his command; not done by one particular mode, but by different ones, and tested by the important test of time. Therefore a summary of it will be a fitting conclusion to this subject. Dr. Bull's cases number 134 operations, extended over a period of seven years; they consisted of 77 reducible, 42 irreducible, strangulated 15. He arranged them in four series: first, 40, in which he ligated the sac at its highest point possible (this was an essential feature in all his cases); the portion below he cut out when small; when large, or containing the testis, he drained it for four days.

The second series, 39 cases, ligated sac as before, with catgut, also sutured the pillars of the ring, and the divided aponeurosis.

Third series: The main feature of this was that the anterior ball only was divided when impossible to reach the neck in any other way. This consisted of 19 cases.

Fourth series, 16 operations, all on children from 4 to 14 years, and all had been done during the past six months. Here he employed a variety of methods. Nineteen of his subjects were over 50 years. He had three deaths, and on four occasions, opened the intestine while separating adhesions, which however did well after being carefully sutured. Primary union was obtained in half of the first three series and in all of the fourth. As to results, in first series he traced 22, and of these, in the first year, there were 7 cases and 6 relapses; 1 to 5 years, 12 cases and 2 relapses. The second series showed, under one year, 5 cases and 4 relapses; from 1 to 4 years, 15 cases and 6 relapses. Third series, 20 cases in first year and 11 relapses; of the fourth series, 16 children and 5 relapses. In percentages, the first method gives 62.63 per cent. recoveries; the second, 60 per cent. Some used a truss after operation, some did not. He recommends a light one for some time after the operation.

His opinion, given with the remarkable candor and fairness, is "that the operation is justifiable; it gives relief for a time, and is not

attended with risk, except in the weak and the aged," but says that "all methods of radical cure will be found unsatisfactory." Thus you will see that, to the majority of us in general practice, there are not many inducements to undertake the operation; unless when after operating on strangulated hernia, we may as well give it a trial and have the best authority advising us thereto; also in some rare cases when the truss will not effect its purpose. But there can be no doubt that still, as of yore, a properly adjusted truss, particularly in the young, maintains its position as the best means of effecting a radical cure, and the remarks of Lawrence, in summing up the criticism of the radical cures in his day, *mutatis mutandis*, apply with some degree of force at present. He says, "the subject of an incarcerated rupture submits to an operation in order to save his life; but he, whose hernia is reducible, endangers his life to get rid of an inconvenience, and the operation affords no greater prospect of recovery than he had without it; for after he has undergone an operation at the hazard of life, the complaint may return, and the only protection against relapse is to wear a truss.

And now, gentlemen, allow me in concluding to express the hope that my thirty-five years, experience of the subject, as it occurs in general practice, may prove advantageous, if not by intrinsic merit, yet by the practical, useful discussion it will evoke; of one fact you may be sure, that I sketched from Nature, whether the draft be true or not. I intended a summary of our present knowledge of the affection, but it is long since anything original has been said on the subject. It has assumed much larger proportions than I intended; yet all the points presented are worthy your attentive consideration.

I need not remind you that the surgery of the present day is bold, active and progressive; never in its history has it occupied so lofty and so brilliant a position. The field of its operations is ever widening, until the imagination scarcely realizes the limit to which it may attain, so the busy general practitioner finds it difficult to keep pace with its progress. Yet the keen competition he has to fight with continually spurs him on. Great, therefore, must be his gratification to have a tribunal such as this to appeal to, where the criticism of different practical minds sifts and analyses for him; so much diversity of opinion separating what is conservative and judicious from that which is rash and reckless; so enabling him to carry away knowledge complete and condensed to be utilized when the emergency arises. Nor need he tire of waiting recollecting that the great test of truth is time, nowhere more fully realized than by this subject.

When coming here I asked a very good friend of mine to come with me offering as an inducement that I was to read a paper. He replied, "I think not; all you fellows who read papers fly too high." I will fly low; perhaps I have too well fulfilled the promise.

My anticipations have been made agreeable by the fact that there has been associated with me men of well-known surgical skill and experience of acknowledged reputation.

I must express my gratitude to the President, by whose courteous consideration I have been honored with the position of initiating this discussion, more particularly when he might readily have had men much better qualified to perform the duty.

Finally, I thank the members for their forbearance, which I feel I have over-taxed. Their well-known good natured kindness justifies me in expecting that to all the defects of this review they will extend a palliative, if not a medical, cure.

NOTE REGARDING OPERATIONS FOR LACERATED PERINÆUM.

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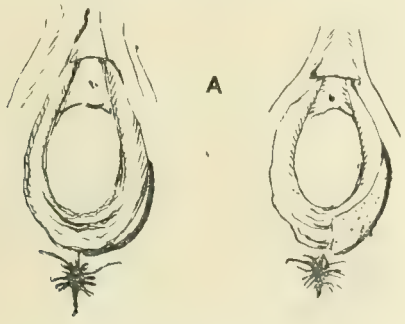
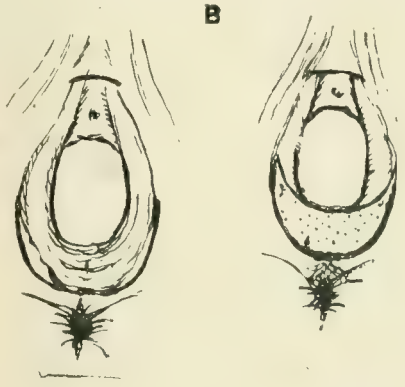
It is amusing to look over the text-books and read the mystical accounts given of a supposed mystical operation. I would like to enumerate the operations for the repair of a simple injury. Their name is legion. Take, to begin with, Emmet's book. The preliminary directions given are so complicated that the ordinary practitioner would require great courage before he dare attempt to repair a ruptured perinæum. The patient is to have purgatives for a whole week before the operation; an enema is to be given in the knee chest position; then follows

a dose of castor oil, and she is ready to be stitched up. Then follows a description of an operation that is difficult to understand, and difficult for a novice to perform. It is ingenious, but has the one fault of most of these operations, namely, that too much stress is laid upon points that are of slight importance.

Then let us turn to Fritsch's work. Here we have diagrams more terrible still. The old time operations are given in goodly number. Hegar's double-winged denudation; Hildebrandt's figure for denudation; Freund's complicated figure. Then the author, as does every author, gives a long description of "my method," to still further mystify the hard-working student and hard-worked practitioner. Why all these writers will stray off for another method when the operations already known fully fill the requirements, I fail to see. In this way medical literature is increasing enormously in quantity, but of an inferior quality. Useful time is thus wasted by both writer and reader. To invent a new perinæum operation, or a pessary, seems to be the desire of many. The change of a suture or peculiar curve of an incision at once, in the present era, necessitates a change in the name of the operation. We hear men continually saying: "I did a Jones' operation yesterday"; or, "I will tie a Smith-Hopkin's knot"; or, "I will make a Jones-Smith incision." Certainly this nomenclature is to some extent necessary; but it has been, of late years, carried to such an extent that the student of medicine will have so much name to remember that he will forget the principle involved in the operation itself.

We now turn to Doran's work. He believes with Dr. T. G. Thomas that one week of purgation is not sufficient, and that two weeks could be consumed for this purpose. It may take two weeks to clear out twenty-five feet of intestine, but any one who has taken a large dose of castor oil feels sure that the alimentary tract of an ordinary healthy man is about empty by the time that the bowels have ceased moving. Perhaps it is different with a woman. "Discharges from the uterus are to be carefully attended to," he says, "and hemorrhoids also require attention. For my part, I snip off any hemorrhoids at the time of the repair of the perinæum, and the cases do very well. A good vaginal douche before the operation, and twice a day subsequently, is sufficient to keep the parts clean, even in the presence of a uterine discharge." He then relates Bantock's operation, the flap of which is identical with that of Hegar's, without the small vaginal prolongation above. Then we have a purse-string operation described—a new application of an old principle—ingenious, but unnecessary, with all the good methods already at our hand.



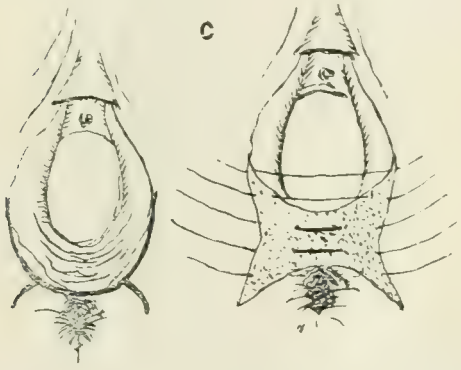


Skene, in his work on diseases of women, gives the most common-sense directions. He says the denudation depends on the peculiarities of the case—tracing the extent of the original tear by the outline of the scar. He does not fill his book with plates of a great many methods, but gives some useful plates for the student, even if he is wedded to any special operation. He gives some valuable advice regarding secondary hemorrhage. This troublesome complication is completely overlooked by most writers on the subject. Many authors say that union by first intention is necessary, or the operation will fail. If the flap-splitting operation is done with silk-worm gut sutures, the operation will be successful, even if union takes place by second

DIAGRAM EXPLANATIONS.—*A* and *B* incomplete laceration; *A*, dark line, shows line of incision, which must be deep, and shows effect; tissues to be well stripped back with fingers. *B*, same, with addition of other side, incision completed, and separation complete. *C*, *D*, *E*, through sphincter ani. *C* shows angular incisions, to make flaps to complete torn anal orifice. *D*, method of peelir g down flaps and of holding in position. *E*, same, with sutures tied, forceps still attached; raw surface left to be closed by two or three interrupted skin sutures.

intention. I have had one such case where the laceration was through the sphincter ani. The cure was complete. She had been operated on before she came into my hands, and the wound did not unite on that occasion, as the operation was done by the paring method, and as silk sutures were used they required removal about the ninth day. The silk-worm gut sutures employed at the second operation were left in until the wound had closed by second intention at the third week, and were with difficulty removed. One stitch is still *in situ*, and gives rise to an unpleasant pricking when the patient sits down. In any case these sutures will completely disappear by the healing of the tissues over them, but are liable to give rise to subsequent discomfort, and even to abscess formation, on account of the stiff bristly ends irritating the tissues.

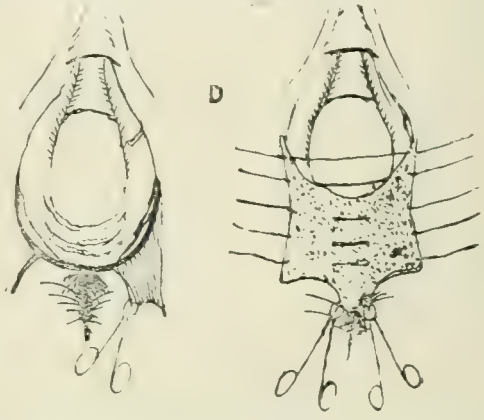
In Hart & Barbour's Manual, the operation is described in a manner to be readily understood



by the student, but they still retain one of the formidable plates of the exact line of denudation as used by Hildebrandt. Simpson's incisions, as described by them, are identical with the incisions made with the scissors to split up the flaps, instead of dissecting them up with the scalpel. Then we have the very elaborate and painstaking record of Kelly, in the American system of gynæcology. He gives diagrams or descriptions of operations of many already mentioned above, and of Bischoff, Voos, Stande, Goodell, Martin. Unfortunately, he does not include plates of the flap splitting operation.

Munde, in the *American Journal of Obstetrics*, July, 1889, describes the flap-splitting operation and gives drawings to illustrate it.

I believe that all other operations for lacerated perinæum can be laid aside and not missed, and that the flap-splitting operation can be adapted to every case. I have now done the operation many times, have seen it done many times by Mr. Lawson Tait, having seen all the operations performed by him during a period of six months, and my own results have equalled, if not surpassed, my expectations. In two cases of complete laceration that I operated on some three or four months ago, the operation has put the patients in as good a condition as they were in before the laceration occurred. Both have complete control of the sphincter One case healed by second intention. In neither case did the operation last over ten minutes. The period required for the administration of the anæsthetic is thus shortened. The operation can be performed in any bedroom, with the patient drawn to the edge of the bed. Only one assistant is required, the one to give the



anæsthetic. The instruments are few in number, a pair of angularly-curved scissors, two pair of compression forceps, a curved perinæum needle with a handle, a sponge, and a few silk-worm gut sutures. The tighter the ligatures are drawn the more the mucous edges are forced into the vagina (and rectum in complete laceration), and the skin edges are forced outwards, and the deeper is the resulting perinæum. This is owing to the manner in which the sutures are introduced inside the raw surface, or, in other words, inside the skin and outside of the mucous membrane. The sutures should be introduced beginning with the one nearest to the pubes, and working downwards, so that the upper sutures will not be in the way of the ones next introduced. They should all be placed before any are tried. The mucous skin edges must be

pushed out of the way as the two raw surfaces are brought together, that they may not interfere with the success of the operation. The incision should be made on each side at the outer margin of the old cicatrix, and should be carried up from the middle line towards the labia on either side. The diagrams show roughly the first stroke of the scissors, then the second stroke on the other side, making the complete split. This is all that is necessary in cases of incomplete rupture. To this, for complete rupture, is added a stroke of the scissors downwards and outwards, from this to form flaps to complete the closure of the anal orifice. As soon as the parts are split they gape and present a raw surface of good size. The size of this raw surface, and the extent to which it can readily be enlarged by peeling up the parts with the finger, is rather a revelation to any one doing the operation for the first time. It really resolves itself into A. R. Simpson's flap operation, but the flaps are prepared by splitting with scissors, and by peeling the parts up with the finger, instead of incisions with the scalpel and dissection with the same instrument. The application of the sutures is, however, totally different, and on the correct application of the sutures the success of the operation is largely dependent. A pair of forceps is hung on each of the little flaps left on each side of the anal margin. These are given a half-turn inwards, so as to twist the skin downwards and inwards towards the anus, where they are destined to remain and form a new anal orifice. They are kept in place by the tendency of the sutures, when in place, to force the skin and mucous edges of the raw surfaces, when brought in contact, further away from one another. The vagina is washed out before the operation; the german scrubbing of the parts with soap and water, and the use of the razor may be done away with in this country. The patients will survive and do well without this unnecessary trouble. The patient's bowels must be thoroughly moved before the operation. This movement must be so timed that nothing more is likely to come away during the operation. In my case of union by second intention, the bowels unfortunately moved as I was applying the sutures, and the irritating bilious matter flooded the whole wound surface. This accident was directly blamable to the nurse who, having forgotten to give the five grains of calomel when ordered, twenty-four hours before the time set for operation, gave it within nine hours of the appointed time. No iodoform need be dusted, as per usual routine, on the wound; but a vaginal douche of warm water should be given very carefully twice a day. For six or seven days the bladder should be emptied by catheter. I move the bowels every day, after the first twenty-four hours, by small enema, and give very light nourishment for a few days. If the patient is restless a bandage is put round the knees, to keep them from any wide separation. The external wound is washed with water, if it is deemed necessary. In those cases in which I have, at the time of the operation, also snipped off piles, and controlled the hemorrhage from them by suturing the edges, it has been necessary to apply frequently a four per cent. solution of oleate of cocaine, to control the pain for the first twenty-four or thirty-six hours. These cases have all healed up without any difficulty.

The sutures, though coming out on the raw surface near the skin and mucous membrane, must be passed deep into the tissues, so that they may have a firm hold of the deeper strictures. Superficial skin sutures may be applied, if thought desirable, but I prefer leaving the skin edges gaping as they are, so that the sutures may be more easily removed. Sutures that bury themselves are sure to give rise to trouble. The ends should be left long.

The flap-splitting operation may be combined with anterior or posterior colporrhaphy. I have combined it with both, and have recently reported one case of rectocele cured by this combination. The flap, if anterior, is simply dissected off in the usual manner, and then the perinæum is repaired. If posterior, it is cut off at its base, and the perinæum is then split and repaired. I have recently used the combination in a case of cystocele, with a perfect result. If in any case the hemorrhage still continues after the sutures are tied, the best plan is to re-open at once, and find the vessel. If this is not done,

the re-opening may become necessary after the patient has come out of the anæsthetic, and when no assistance is at hand. I have controlled very severe secondary hemorrhage by packing the vagina, but suffered many night calls and much anxiety. The hemorrhage stopped and set in again half a dozen times, and blanched the patient, but I could not see any urgent necessity for undoing all my work. The result was ultimately perfectly successful. The hemorrhage was due to sudden bursting of a stitch, uniting the edges of the vaginal pared surface, occurring during a fit of uncontrollable laughter.

As to silk-worm gut sutures, I may say that they will produce suppuration just as any other sutures will. The wound surface itself may suppurate, but because the sutures can be left in, and because the sutures hold well, union will take place by granulation, and will be satisfactory. In such cases, sutures should be left until healing is complete.

Having seen the operation done, there is no practitioner of ordinary intelligence who cannot sew up a lacerated perinæum, and cure his patient. Careless after-treatment of a case done by any of the many methods devised will surely result in failure. It is not so much the method of operating, as the care of minor details taken before and after operation, that leads to a successful issue.

THE PARIS MORGUE.

The morgue was founded (1) to shelter and preserve bodies, where crime had been committed, till the machinery of the law could be set in motion ; (2) to expose the dead bodies of unknown persons to the public gaze, until their identity should, if possible, be established. For this purpose two principal apartments were obtained, about which were grouped smaller rooms for various accessory purposes.

PRESERVING ROOM.

The room destined solely for the preservation of the dead is very large, with high ceiling, and paved with stone. In one wall are a number of compartments, arranged in three superimposed tiers, of the length of the human body. Each compartment, resembling a baker's oven, is hermetically closed by bolted wooden doors. The walls of these cells are lined by pipes, placed side by side in the lowest tier, separated by small intervals, and consequently diminishing in number as we approach the upper tiers. Through these pipes there is a continual circulation of cooling fluid (chloride of calcium solution), which lowers the temperature to 20° below O°C. in the lowest tier, and from 10°, 8° below in the upper tiers.

At 20° the bodies are frozen in their entire thickness, including the viscera. They now form solid blocks as hard as marble, which can be broken only by the aid of the axe or hammer. In that state they can be preserved for an indefinite period, and it is often curious to witness the stupefaction experienced by some criminals, arrested a year or more after the murder, when they are brought face to face with their victims, and see the wounds they had inflicted, in the identical state in which they had left them.

Bodies fished out of the Seine, and already in a state of putrefaction, are exposed to the same temperature (20° C.). They, of course, do not return to their former condition, but all decomposition is completely arrested.

Although this proceeding preserves the body, it renders the autopsy very difficult ; for, that it may be strictly accurate, the body should have regained its previous suppleness. The body thus frozen, when exposed to external air, requires several days, even in summer, to return to its natural state, and frozen tissues quickly putrefy when thawing takes place.

To obviate this difficulty, a hot chamber has been erected in a neighboring room, whose temperature can be raised to above 200° C. The bodies are exposed to this temperature for three or four hours, after which the autopsy may be proceeded with.

When it is not necessary to preserve the bodies for a long period, they are placed in the compartments of the upper tiers, where the integument and muscles are frozen, but not the viscera. Such bodies are well preserved for some weeks, and are much more easily thawed out.

EXPOSING ROOM.

The exposing room is the one accessible to the public. It is divided by a glass partition into two rooms of equal size. The one is accessible from the street ; the other is entirely shut

off, and contains the bodies lying on tables, the feet turned to the public, the head raised by a a block, so as to bring the face fully into view. The bodies are fully dressed, and in the same condition as when found, so that they may easily be recognized, if any one who had known them in life should, by chance, pass in front of the window. In this event, all he has to do is to make a statement to the clerk, who is always to be found in an adjoining room.

The temperature of the inner room is constantly maintained from 2° above to 2° below O°C. At this temperature bodies cannot be kept longer than eight or ten days. At the end of this time it becomes necessary either to transport the bodies to the compartments, or to bury them.

The method employed for obtaining a low temperature in this room is the following :—In the upper part of the room, near the ceiling, is a double-inclined plane, consisting of metallic plates, superimposed in the manner of a tiled roof. The ridge of this extends across the whole breadth of the room. The pipes containing the chloride of calcium solution, open at this point, and distribute the cooling liquid in two large sheets, thus bringing a large surface into contact with the circulating air. At the bottom of each incline, the fluid is collected into a trough, whence it is emptied into a frost-covered pipe, which brings it back to the machine room.

The maintenance of the low temperature is very expensive, on account of the great size of the room. The first contractor received 20,000 francs per annum. The expense has since been reduced one-half, by substituting compressed air for steam as the motive power.

As we have already seen, the lowering of the temperature is due to the dissolving of the anhydrous chloride of calcium, which, in passing from the solid to the liquid state, produces a degree of cold sufficiently intense to freeze mercury (40°C.). Pumps are used to propel this solution through the pipes which we have seen in the interior of the compartments of the preserving room, and over the double-inclined plane in the exposing room. The air brought into contact with this intense cold is soon reduced to the same temperature.

There is a good amphitheatre where autopsies are performed, . On one side there is a small laboratory, where only elementary researches are carried on, and where specimens, which it is necessary to submit to more minute examination, are collected in special jars. Still further, and near the entrance, is a comfortable room, in which the physicians of the establishment can assemble.

G. A. F.

NATURE, THE BEST ACCOUCHEUR.

By J. H. GARDINER, M.D.

I am a general practitioner of eleven years standing ; and for at least eight years of that time, I have attended from ten to twenty cases of confinement monthly, with the following results : I have had six deaths during the puerperal period ; two from embolism, two from puerperal inflammation, one from typhoid fever, and one from shock caused by a large loss of blood at time of birth, and a sudden chilling from open window on a frosty night in October, two days after premature birth of twins. Six of my patients have suffered from pelvic cellulitis ; at least four of these belonging to families with a tubercular diathesis. Four or five others have recovered slowly from causes unknown. All others have been well enough to be up and around by the ninth or tenth day. I have seen one case of puerperal convulsions in a very mild form, and in two or three cases I have had a post-partum hemorrhage.

I always wash my hands with soap and water on entering the lying-in room, and if I have been attending any suspicious surgical or medical case, use carbolic acid in the water. I use either sweet oil or lard, or whatever other substance I can get in the house where I am attending, for lubricating purposes, both for hands and instruments. I am careful to see that all clots and portions of the placenta are removed, and that the patient is free from all bloody or wet clothes, and also that the bed is clean and dry, before I leave the house. I know of one case in which the cervix uteri was ruptured, but the patient refused to have it operated on, and she has since borne children, but never complained of any inconvenience from the tear. I have once stitched a ruptured perinæum ; in all other cases nature has performed the cure to the

satisfaction of myself, the patient, and the husband. I do not know whether specialists on women's diseases would be pleased or not. I am sure that, from the amount of violence I have had to resort to in some severe forceps' cases, considerable bruising must have resulted to the soft pelvic structure; but nature, in all forceps' cases save one, effected a cure in the usual puerperal period. The exception was one in which cellulitis followed with perfect recovery, after six months in bed. In severe cases I always examine my patient to ascertain if much damage has been done, and if the parts are very much bruised, I order, on the third day, a warm carbolic injection. I also use this in all cases, if the discharges become at all offensive, and generally instruct the nurse to use a little carbolic acid in the water she uses to bathe the patient with.

Now, what are the causes of puerperal inflammation, or puerperal septicæmia? In order to answer this, it is necessary to study the woman before delivery, and the changes that have taken place during the nine months' growth of the fœtus; also, how nature restores the normal condition of affairs, whilst guarding with jealous care the well-being of the patient.

The first period is one of building up—of growth. The second period, one of breaking down—of decay. During the first period, large quantities of adventitious tissues are formed; these being no longer wanted, have to be removed. In the second, nature's disinfecting and excretory apparatus are taxed to their utmost, and all that is asked by her is a fair field and no favor. Give the skin, the lungs, the kidneys, the bowels, and the uterus, a fair show, and in ninety-nine cases out of every hundred, no other treatment will be necessary. But chill your patients, and stop the action of the skin, and the kidneys, bowels, uterus, and even the lungs, will become engorged, and in time paralyzed. The mammary glands will cease to secrete, and your patient will have puerperal fever. Restore the secretions of these parts, and the patient is better. Again, introduce some source of septic poison into the vagina or uterus, and it may become absorbed, and the same result follows. The same may be said of the lungs or bowels. In every case the strictest care is required, always remembering that nature, as a rule, is the chief agent, and all that the accoucheur can do is simply, where she fails, to aid her in her efforts, never to retard her in her work by injudicious meddlesomness or criminal carelessness; and do not ascribe to art that which can be done, and is done, in a far more effective, if less expensive, way. A general practitioner attends all classes of cases, and strict care should be observed; but it is only in a very few instances, such as erysipelas, pyæmia, or septicæmia, that any special care is necessary. And I think it safer to refuse to attend cases of confinement, if you have a well-marked case of puerperal fever.

THE
Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, AUGUST 16, 1890.

THE UNIVERSITY OF TORONTO, AS COMPARED WITH FOREIGN UNIVERSITIES.

We have received a letter from a Professor of the University of Toronto, who has been abroad for some months, which gives some very interesting particulars about certain universities in Europe, and especially in Germany. The University of Zurich stands in the front rank, although its capacities, when compared with those of many other institutions, are somewhat limited. Being about the size of the University of Toronto, it becomes a matter of interest to compare the two. The Canton of Zurich contains altogether 200,000 inhabitants, certainly not a vast population; but it gives to the university, in which it takes great pride, no less than $50,000 a year. A canton is much like one of our counties. From present indications, this generation will have to pass away before the County of York, with the generous City of Toronto,

will give as much as 50,000 cents to our University. In the matter of money, therefore, it will be seen that Toronto and little Zurich are as far apart as the two poles.

They don't object to medical faculties in connection with universities in any part of the world, excepting this Province of Ontario. Zurich, like most of the important universities, has a medical faculty. Our correspondent, who, by the way, is not connected with the Toronto Biological Department, tells us that the facilities of Toronto University, in the primary subjects, are quite equal to those of Zurich, and that its physiological laboratory is decidedly better. He adds, incidentally, that he has not seen a physiological laboratory in Europe that is superior to the one planned and conducted by Professor Ramsay Wright. In the Pathological Department, Zurich is far in advance of Toronto. This fact has been appreciated for some time by the friends of the latter, and it was hoped that the Government of Ontario would give some assistance in this direction. As the Government, however, has not shown any aggressive spirit in the matter, the friends of the medical faculty are raising a fund by subscription, to aid in the teaching of this important subject.

In the matter of clinical teaching, Zurich, in some respects, stands ahead of Toronto, but the methods of the latter have improved so much lately that she is not far behind her German sister. We understand that efforts will be made during the coming session to make the clinical teaching in Toronto more thorough and practical than it has ever been before. There is no reason why the medical teaching in Canada should not be equal, in all respects, to the best in the world. We are glad to know that professors of the University of Toronto are fully impressed with this fact, and we are pleased to be able to state that six members of the staff are spending a goodly portion of the summer in studying the methods of teaching, both primary and final subjects, in the best British, French, and German medical colleges.

THE UNIVERSITY OF TORONTO AND THE CITY OF TORONTO.

The defeat of what was known as the University By-law, by an overwhelming majority, was a great surprise to many, both in and out of Toronto; and we are frequently asked, What does it mean? We cannot undertake to answer the question; but will try to state briefly the position of matters. Many years ago, the authorities of the University gave to the city certain lands, known as Queen's Park, and the Queen and Yonge Street Avenues. There were certain conditions connected with the gift, which compelled the city to carry out certain provisions in connection with maintenance, etc. The city failed to fulfil its portion of the contract, and finally the courts decided that it had forfeited all rights to said lands, which consequently were to revert to the University.

The position of things at this juncture was deplored by all, and after several conferences between University trustees and members of the City Council, with the Mayor, it was agreed that the city should get possession of the park and avenues without any restrictions, and should give to the University $6,000 per annum to endow two chairs—such chairs to be chosen by the city. It was thought that the city could easily give such a sum to the University; and on the part of the trustees of the latter, it was considered that, although the sum was small, under the circumstances it was better to accept it, and thus remove all causes of friction between the two. After the disastrous fire, offers of assistance came from all nations, in all climes. It was proposed in the City Council that Toronto should give the University $50,000. After some considerable discussion, a scheme was proposed which would cost the city little or nothing, while it would be a great benefit to the University; that was, to give the University a lump sum of $200,000, instead of $6,000 a year forever. As is well-known, the by-law to grant the $200,000 was defeated by about four to one. Little wonder is there that the result created surprise.

The outside offers of assistance have materialized, and princely gifts, especially for the library, are coming in from all quarters. Toronto, which derives more substantial benefit from the institution than all the world besides, is the only place in the world that has positively refused to raise a finger to assist the University in its time of distress. Fortunately, it will make no difference to the University. It will be restored, and far more than restored. A little

more will be left for its friends to do, but they will assume the burden. The city will some day, we hope, be heartily ashamed of its action. If St. Paul lived now—in Toronto—he would scarcely boast that he was a citizen of no mean city.

LODGE PRACTICE.

It is well known that what is called "lodge practice,"—that is, the practice of attending lodges, clubs, etc., at a contract price of so much per annum,—is becoming very prevalent in this province. It is rather difficult to realize the extent to which it has grown in Toronto. We have various kinds of lodges, of religious societies, mutual benefit societies, national societies, united workmen societies, and other organizations of all sorts and conditions, composed of employees of factories, mills, etc. Physicians frequently join a number of these societies, simply for the purpose of securing contracts as "lodge doctors."

We have no desire to discuss, now, the question of principle involved. There is something to be said on both sides of the question. The practice originated, we believe, in the old country, and is, at the present time, looked on with considerable favor by a large number of independent and high-minded members of the profession in Great Britain. We do not wish to get on too high a pedestal and cry "unclean" to every one who engages in this contract business; but we must adhere to the opinion which we expressed some months ago, that it is, in several respects, degrading to the profession of which we are members. Usage in this direction in Great Britain will not carry much weight with us, especially in view of the fact that the social status of those who engage largely in such practice is generally low in England.

Our desire is rather to point out the fact, as stated by a correspondent, Galen, in the last issue of THE PRACTITIONER, that professional opinion appears to be decidedly against such practice. Galen referred, among other things, to three very pronounced expressions against it in the month of June: one at the meeting of the Ontario Medical Council, and the other at the meeting of the Ontario Medical Association. The President of the latter body, Dr. Temple, in his annual address, denounced the practice very strongly. Some of the American visitors expressed their surprise on hearing that it was so common in our cities.

It has been proposed by some that all physicians engaged in such practice should be excluded from such societies as the Ontario Medical Association. We would not like to say that such drastic measures are necessary or expedient; but we are inclined to think that professional opinion is going to have an effect, in the near future, in the way of curtailing the practice. Even now many who are engaged in it are thoroughly tired of it. No one now takes much pride in boasting that he has become one of the Grand Knights of the Maccabees, or a member of the Ancient Order of Peanut Vendors, or one of the Brotherhood of the King's Own Cobblers, simply for the purpose of making money out of contracts with these worthy organizations. Many of our young practitioners, who are ambitious to attain good positions, have fully decided to avoid lodge practice in every form. Others who have been engaged in it are giving it up. It is only fair to say, however, that quite a number of physicians of various ages, whose names are above reproach, have been, and still are, engaged in more or less contract work.

CLEANLINESS IN MIDWIFERY.

We publish in this issue a communication from Dr. Gardiner, of London, on "Nature, the best Accoucheur." We are afraid there are some points connected with antisepticism, or asepticism, which are not sufficiently understood. The important desideratum is perfect and thorough cleanliness, and for this purpose hot water, soap, a nail brush and a pen-knife, are really the essentials. In addition to these, carbolic acid is sometimes used in a way that is perfectly useless, or worse than useless, if any virtue or entire sense of security is associated with it. We frequently see a little carbolic acid, a drachm or thereabouts, added to a quart or two of water for disinfecting purposes. It may do no harm in such proportions, but it certainly does no good. If it be deemed advisable to use a germicide, the bichloride of mercury is the best in ordinary use, and it may be carried very con-

veniently in the obstetric bag, in the shape of the tablets which can be procured from all druggists.

The ordinary routine, in all cases of labor, should consist in perfect cleansing of the hands with warm water and soap, before making an examination. In addition, it is well to have a solution of bichloride, 1-2000, in a separate vessel, for further cleansing of the hands. The accoucheur should have his own lubricant in the shape of borated vaseline, or something of that sort. If he has not this at hand, he should not use every specimen of lard or grease which may be presented to him. We think ordinary soap and water are safer, even though the soap may to some extent neutralize the germicidal effects of the bichloride. A similar warm bichloride solution is one of the best that can be used for washing the external genitals after labor is completed, or warm water alone will answer very well. The "little carbolic acid" that may be added by the nurse for the same purpose, simply makes a certain amount of *smell*, without accomplishing any good.

The directions about cleanliness are exceedingly simple and easy to carry out. They appear to be too simple for some great minds, and are frequently, through that or other reasons, neglected. This neglect of these simple precautions is the common cause of puerperal septicæmia. The poison is generally introduced from without on dirty finger tips. We agree with Dr. Gardiner in thinking that, in the absence of septicæmia, nature is generally able to effect a cure even when there is considerable bruising; and probably we would not be very wide of the mark if we considered that there is always considerable bruising. Laceration of the cervix is very common, if it does not occur in the majority of cases, and our correspondent is correct in supposing that nature is generally able to unite such tears, and probably does her work better when there is no interference. Meddlesome midwifery is a nuisance—dirty midwifery is an abomination.

CENTRAL BOARD OF EXAMINERS FOR THE STATE OF NEW YORK.

An important act has been recently passed by the legislature of the State of New York which will materially affect the standing and status of the medical profession in that State. The bill was approved June 5, 1890, and will go into effect September 1st, 1891. According to the text of the bill, as published in the Buffalo *Medical and Surgical Journal*, there will be three separate boards of medical examiners: one representing the Medical Society of the State of New York, one representing the Homœopathic Medical Society of the State, and one representing the Eclectic Medical Society of the State. These three boards of medical examiners will be under the supervision of the Board of Regents of the University of the State of New York. The questions for the various examinations will be submitted by the three boards to the Board of Regents, who will choose the questions to be used in such a way that these will be of the same standard for all candidates in all subjects, excepting practice of medicine, therapeutics, and materia medica. Each examination will be under the supervision of the Board of Regents, through an examiner appointed by that board, such examiner not being a member of any of the three boards of examiners.

This arrangement will throw the responsibility of conducting the examinations chiefly on the Board of Regents. This will be, practically, the central board of examiners for the State, and will be very much like our system in Ontario, where the board of examiners for the Medical Council is supreme in the matter of granting license to practice. A degree or diploma from any university, or teaching body, will cease to carry with it a license to practice in the State of New York. The power to grant such license will be entirely in the hands of this Board of Regents. The act also demands a preliminary education, in accordance with the standard and rules of the board. Such preliminary examination may be passed at any time before the completion of the first year's studies. Each candidate for the final examination will be required to have attended lectures during at least three full sessions. Arrangements have been made for the recognition of similar licenses granted by examining boards of other States, providing that they show a standard of requirements equal to that of New York.

This is likely to raise, considerably, the general standard of education in New York, and other States adopting similar regulations. It is not

yet quite what we would like to see. The preliminary examination should be passed before the student commences to study medicine, and a course of four years should be required, as in Ontario.

DR. SULLIVAN'S PAPER.

The Hon. Dr. Sullivan's paper on "Hernia," read before the Ontario Medical Association, appears in the present issue of THE CANADIAN PRACTITIONER. We trust that it will be carefully read, not only by the general practitioner, but by the specialist in surgery. The individual who has a rupture, suffers from a condition the gravity of which it is difficult to over-estimate; we are apt to think lightly of it because of its great frequency; it is a class of disease with which we are all familiar; it is a common thing, too, for us to come in contact with afflicted patients who have been absolutely neglectful of their hernia, because they do not realize the serious nature of the complaint. The danger of strangulation, which may prove fatal in a few days, should always be kept in view, and the treatment, therefore, demands our greatest care.

Dr. Sullivan has written a valuable paper; he has had extensive experience, and he has presented to us his views, as the result of that experience, in an able manner. The truss is often spoken of as if it were a palliative form of treatment only, and that a cure is not to be anticipated. We are pleased to see that Dr. Sullivan differs from this view, and states that the truss "is still the safest, surest, and most permanent radical cure we possess"; he rightly condemns all bosses and protuberances, which keeps the canal open, and prevents the possibility of cure.

We heartily endorse his views with regard to the grave dangers of delaying the operation where the bowel has become strangulated, and the exception he takes to the opinion of some authorities, who advocate returning gangrenous or "doubtful" bowel into the abdominal cavity. There are many other valuable suggestions in Dr. Sullivan's paper, which we cannot refer to at length, but which will be appreciated by all, coming, as they do, from a man of exceptional skill and experience.

PYOKTANIN, THE NEW ANTISEPTIC.

The antiseptic powers of the aniline dyes have long been known to bacteriologists, who have observed their effects upon gelatine cultures. Stilling and Wortmann, of Strasburg, have been studying their action, with the idea of applying them to practical medicine. Their researches have led them to regard certain anilins as antiseptics even more powerful than corrosive sublimate. Merck has patented them, and introduced them under the name of Pyoktanins, the pus destroyers. Of these there are two, the blue and the yellow.

Pyoktanin, under the name of methyl violet, is well-known to every physician and microscopist as a staining agent. It may be used in the form of a pencil made of the pure drug, or as a powder, two parts of Pyoktanin to 1,000 of talc, or in watery solution, 1 in 1,000 or 2,000.

Pyoktanin is free from any smell or any toxic effect, a great advantage as compared with the antiseptics now in use. Unfortunately, unless very carefully handled, the clothes and the hands are deeply stained by it. These stains may be easily removed by a dilute solution of hydrochloric or of nitric acid.

Pyoktanin has proved itself specially useful in soft or in hard chancres, and in all sorts of syphilitic ulcerations. One reporter claims that by its use soft chancres are soundly healed in from three to ten days. It is said to give satisfactory results in gonorrhœa, when used as an injection of 1 in 1,000.

There would seem to be in these anilins a dangerous rival to the derivative analgesics, such as antipyrine, for it is now proposed to use methyl blue to relieve pain.

UNIVERSITY OF TORONTO MEDICAL SOCIETY LECTURES.

A letter from Dr. Ferguson, the President of the University of Toronto Medical Society, appears in this issue, and gives some interesting particulars respecting the regular courses of scientific lectures which are to be delivered annually for this society. As our readers are aware, the first course was delivered a few months ago by Dr. E. C. Seguin, and the lectures were highly appreciated by all who heard

them. Abstracts of the three lectures were published in THE PRACTITIONER. They were published in full by the *N. Y. Medical Journal*, and reprints are now in the hands of Dr. Ferguson for distribution to life and ordinary members. All practitioners are urged to become life members. In doing so, they will receive a direct return for themselves, and will, at the same time, assist a very worthy enterprise. The President and members of the society, who are chiefly students, deserve much credit for the work they have done, and should receive every encouragement.

A LICENSE IN NORTH DAKOTA.

According to the new law regulating the practice of medicine in North Dakota, no one will be allowed to engage in practice until he has passed an examination in all the primary and final branches. No one will be admitted to such examination until he has taken at least three courses of lectures of six months each. The examinations will be conducted by a Central Board, appointed by the Governor of the State. Dr. J. R. Logan (Trinity, '85) is secretary of the board, and examiner in Diseases of the Eye and Ear, and Nervous Diseases. Dr. F. N. Burrows (McGill, '85) is examiner in Practice of Medicine. Dr. C. Maclachlan (Tor., '89) is examiner in Obstetrics and Diseases of Women and Children. Dr. T. O'Brien (McGill, '84) is examiner in Anatomy and Surgery. It will thus be seen that Canadians are well represented on the board.

Hospital Reports.

FACIAL PARALYSIS.

UNDER THE CARE OF A. M'PHEDRAN, M.B., IN THE TORONTO GENERAL HOSPITAL.

Reported by Mr. Heaslip.

Henry G., æt. 53, engineer; admitted June 20th, 1890. Had gonorrhœa when about twenty-three; no history of syphilis; no other serious illness until January, 1889, when he helped a neighbor for a few hours to shingle the roof of a barn. As he shingled, there beat upon his right side a driving storm of rain, hail, and snow. The next day he found he had taken cold, and on the evening of the third day after the the exposure pains came on rather suddenly, commencing in right leg and passing up the arm of the same side. The sensation is described as that of the passage of a current of electricity. His features became drawn towards the left, much as they are at present. He thinks that at this time he experienced a very slight loss of power in arm and leg of right side. His hearing, though dull for some years previously, now became still worse on the affected side. Difficulty was experienced in pronouncing certain of the longer words. He resumed work after six weeks, and in two or three months the face became again quite straight; at the same time, hearing and speech improved.

He was quite well until attacked by "La Grippe" in February, 1890. Soon after its commencement he felt pain in the right frontal and temporal regions, where it has since continued.

About May 1st, he noticed paralysis of right side of face coming on again, becoming complete in about two weeks. At the same time the patient became totally deaf in the right ear; muscles in right side of face are paralyzed; in speaking, the mouth is drawn towards the left side. The patient is unable to wink or close the right eye; in attempting to do so the eyeball is drawn upward. The lower eyelid is depressed; owing to this and to paralysis of the orb. palp. there is epiphora. From constant exposure, the conjunctiva has become inflamed; there is also a very small ulcer on the cornea. The eyebrow is lowered and the patient is unable to frown or wrinkle the forehead on the affected side. He is unable to whistle. The right cheek is flaccid and sometimes is bitten during mastication. He has difficulty in preventing the food becoming collected between cheek and gum. The cheek and lips are puffed out on the affected side by the expired air in speaking or blowing, and the air passes out almost entirely at the angle of the mouth on the affected side. There is loss of sense of taste in the right half of the tongue; appetite is good; some nausea and belching up wind after eating; vomits after nearly every meal, occasionally before breakfast. He says he does not vomit his food, but only some mucus. This condition has only existed for a few days previous to admission.

The muscles supplied by seventh nerve react to a strong Faradic current; reaction to galvanic current considerably exaggerated.

The treatment consisted in counter irritation behind the ear, by blistering with liq. epispasticus, the administration of pot. iodide, and the stimulation of the facial muscles daily with the Faradic current, to prevent atrophy of them. Sedatives were also given for the stomach. He left the hospital early in July, very little benefited; but much could not, in any case, be expected in such a short stay.

The prognosis is fair; he will probably make a fair recovery after some weeks. The response to the electrical currents shows the function retained in at least some fibres of the nerve.

The first attack he had was evidently due to cold, but there is no such history in this attack. In nearly half the cases there is no such history. The man has been subject to rheumatic pains, he says, and the neuritis may possibly be rheumatic. The complete deafness indicates the internal auditory meatus as the seat of lesion, a rare location. It is not in the medulla, else the muscles in the upper part of the face would suffer little, if any, and both voluntary and emotional movements would not be equally and completely paralysed, as they are here.

A CASE OF TETANUS OF THE UTERUS, TREATED BY ANTIPYRIN.

UNDER CARE OF A. H. WRIGHT, M.D., M.R.C.S. ENG. IN BURNSIDE LYING-IN-HOSPITAL, TORONTO.

Reported by L. F. Barker, M.B.

I. A., æt. 22, primipara; has always been well with the exception of leucorrhœal discharges, which have been present for the last two years. Habits have been sedentary. Pelvic outlet slightly narrowed. Pregnancy normal. There was prolongation of first stage of labor owing to rapidity of os extern. cervicis and premature rupture of the membranes. Three 15 grain doses of chloral hydrate were given to assist in relaxation of the os, but 24 hours elapsed before the completion of the first stage. The head descended rapidly until the middle of the vaginal canal was reached, when progress became slow. At the end of 40 hours the head was well down on the perinæum, but as the latter remained very rigid and the vaginal outlet much contracted, the pains became ineffectual. Up to this time the general condition of the patient had been satisfactory, but symptoms of exhaustion now began to appear. The pains became shorter and more frequent. The pulse rose to 100 and over, and patient complained of nausea and thirst. Before very long it became impossible to make out distinct intervals between the pains, and on examination the uterus was found retracted, and in a state of *tonic* contraction. Dr. A. H. Wright ordered 15 grain doses of antipyrin every fifteen minutes for three doses. Before the second dose had been given, patient felt easier, and the tonic internal contractions could again be made out. After the 45 grains had been taken the pains were about three minutes apart, and the tetanic contractions had disappeared. The head, however, being very large in proportion to the outlet, and no advance being made, chloroform was given, and the house surgeon, Dr. L. F. Barker, applied the forceps and delivered the head by gradual traction. The uterus did not contract down well and some blood was lost. Ergot was administered in one drachm doses and the uterus watched closely for three-quarters of an hour, when it contracted well. The results obtained from the administration of antipyrin in this case would justify its use early in uterine tetanus, before the muscle-fibres and nerve-centres are exhausted by prolonged tonic contractions. It would seem probable that the drug acts directly on the nerve-cells in the parturient centre in the lumbar cord, lessening their irritability.

DOUBLE PYOSALPINX—PELVIC PERITONITIS — RECURRENT OPERATION—SECONDARY HEMORRHAGE—RECOVERY.

UNDER THE CARE OF DR. JAMES F. W. ROSS, M.D., L.R.C.P. LONDON, IN THE TORONTO GENERAL HOSPITAL.

Mrs. J.; æt. 26; referred to me by my friend, Dr. Parry, of Toronto. Menstruated first at about 14. Was then irregular, at times coming on every other week, and at times going from two to five weeks. Married, and had one child. In the last three years has had four miscarriages, the last one two years ago. Has been unwell about every four weeks until lately,

when it has come on every two weeks; clots and a profuse discharge of blood; leucorrhœa. Had "inflammation" after her miscarriage; ill for three weeks; pain in the back, down sides, and in front of the lower part of the abdomen. Has been very tender since, and suffers much pain when menstruating. Attacks of pain and tenderness have been coming more frequently of late, accompanied by chills and fever; confined to her bed most of her time; losing flesh; attacks come on whether in or out of bed; at times cannot straighten her right leg.

When I saw her, the temperature and pulse were both elevated. On examination, I found uterus enlarged and pushed toward left side. A mass connected with the uterus felt on right side, evidently dilated tube or enlarged ovary. A very indefinite feeling. Pelvic organs seemed matted together. Operation advised; husband consented.

April 4. In hospital. Chill last night; temperature, 100.4; pulse, 107; severe pain over lower abdomen.

April 5. Herpes labialis; temperature and pulse still elevated.

April 10. Operation; chloroform given; removed thickened tube filled with pus from left side; adhesions very dense; pelvic organs all matted together; hemorrhage very severe; right tube could be barely made out, but at last peeled from its bed with the corresponding ovary; washed out with hot water; hemorrhage ceased; drained; pus found in each tube, and each thickened to about ¾ in.; ovaries not enlarged; microscope showed loss of epithelium over villi of the tubes and small cell infiltration of the tube walls.

3 P.M. Tube emptied every ¼ hour; ℥ 11 each time chiefly serum.

9.30 P.M. Return of hemorrhage; ℥ 11 of pure blood every 15 minutes until 10.30; I was sent for, but on arrival found that the blood had again ceased flowing; temperature, 100.8; pulse, 102; pain severe; hypodermic, $\frac{1}{10}$ grain morphia sulph.

April 11, 1 P.M. Pulse, 100; temperature, 102.2; after this, severe distention came on, but was controlled; patient made an excellent recovery.

July 14. Patient returned, looking hearty, and feeling entirely relieved.

Personal.

DR. W. G. BIGELOW (Tor. '90) has settled in Chicago, Ill.

Correspondence.

LETTER FROM BERLIN.

Editor of CANADIAN PRACTITIONER:

BERLIN, July 29th, 1890.

DEAR MR. EDITOR,—According to promise, I send you a few notes of my brief sojourn in Europe, hoping that some of the facts given may not be uninteresting to your readers.

Eight or ten day's time is too short for any one to form even a crude idea of the advantages of London as a place for medical education. When, however, one has previously spent some months as a medical student in that great city, he can more easily appreciate its present state, as well as any changes which may have been made. The London schools are at present, as they have been for years, noted for their eminently practical character. The physicians and surgeons are, if possible, more courteous, and every facility is given for the examining of patients. There still exists the same difficulty in the study of special branches. It is not easy to spend more than two or three hours each day in work at any one subject, and this can only be done by examining the various calendars, and carefully noting the lecture hours in each. The formation of a post-graduate faculty does not seem to have made much improvement in this respect. The lectures are given in different parts of the city, and much time is lost in going from one to the other. If one of the larger hospitals, for instance, St. Bartholomew's, Guy's, or the London, was given up entirely to post-graduate instruction, London would be without a rival as a centre for advanced medical education. The thorough and practical instruction given makes up for many defects. There is no "rule of thumb" diagnosis. The physician endeavors, both in the examination and treatment of patients, to grasp the whole case, so as to be of the greatest service to the patient. He is, at the same time, clear and thorough in his remarks to students, taking up the various bearings of the case, and the reasons for the treatment adopted. This, of course, needs much

time and patience, both of which are freely given. In going from one clinic to another, one is struck by the general sameness of treatment. This is more particularly the case in the department of skin disease.

The prevailing treatment for alopœcia areata is the external administration of chrysophanic acid, fifteen grains to the ounce of lanolin. The disease is generally thought to be of parasitic origin; but, in some cases, its nervous character seems established. Mild citrine ointment is the usual external application for impetiginous or pustular eczema.

The usual treatment of tinea tonsurans, of which there is in London an enormous number of cases, may be given as follows: First, wash the patches with ol. terebinthin., and then apply Coster's paste. This is continued for two applications, one each week, when some milder agent is used, such as the mixture of carbolic acid and liq. potassæ. In Dr. Crocker's clinic, a little girl of about ten years of age, suffering from warts upon the hands, was being treated by the internal administration of alkaline purgatives. She had not taken the medicine long enough for one to judge of its efficacy. In a general way, it may be stated that lupus erythematosus is treated by scarifying, and lupus vulgaris by scraping and cauterization. Superficial epitheliomata are treated by scraping and the after application of strong nitric or sulphuric acid. Pyrogallic acid is not used so generally as with us; its place being taken by salicylic acid.

Chronic eczema, with a slight amount of itching and infiltration is treated externally by the following lotion and ointment:

℞.—Liq. carbonis detergen ʒ ii.
Aq. ʒ viii.

to be mixed with an equal quantity of liq. plunbi subacetat dil. This is applied five or six times during the day, so that the part is constantly moist, and at night the ung. precip. alb. is used. This, together with proper internal medication, appears to be very effectual.

The writer had the pleasure of passing some hours in the museum of the Royal College of Surgeons, accompanied by Dr. Peters. It is only fair to say here that Dr. Peters' success in passing the primary examination for Fellowship of the Royal College of Surgeons, three weeks after his arrival in England, was considered in London to be an unprecedented feat. The general rule is that after a year's special training the majority are rejected. A noted London physician, with whom I was speaking of Dr. Peters' success, quietly remarked, "You must understand well how to teach anatomy in your school."

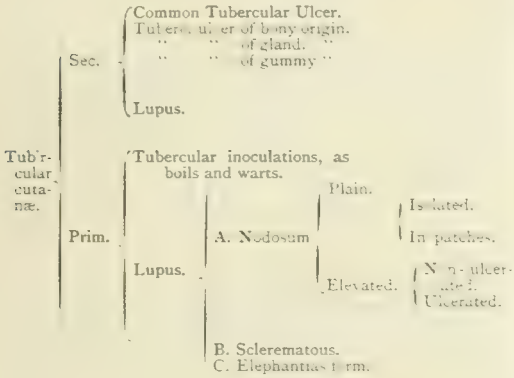
As we examined some of the more interesting specimens in that wonderful and unrivalled collection of the College of Surgeons, we could not but express the hope that a museum on a more extensive scale would soon be established in connection with the Toronto University. There is no reason why a fairly good anatomical museum could not be completed within a few years. It would be of the greatest practical importance to students. The expenditure of a few hundred dollars each year for alcohol and glass jars would be all that would be required; the industry and energy of demonstrators and students would supply the rest. Will the University take it in hand?

A noticeable change has been made in London with regard to practical laboratory instruction in both primary and final branches. The English medical schools, although slow in following the German and Edinburgh universities, are now paying great attention to laboratory instruction, regarding it as absolutely necessary that a student should have abundant and deep foundation upon which to build the superstructure of professional knowledge.

Paris presents features in medical education quite different to those of London. There is but one medical school, with a very large faculty. The latter includes almost all the best known names in the French capital. There are at least six or eight large hospitals in different parts of the city, where the clinical lectures are given by members of the faculty. The lectures in the primary department, as well as those of a didactic character in the final branches, are given in the École de Medicine, two large buildings, one of which is principally made up of immense laboratories, and the other of museum and lecture rooms. The practical laboratory instruction seems to be of a most thorough character, but the clinical teaching is not as good as one might expect. Charcot's clinic, at the Salpetriere, and Fournier's, at the St. Louis, were excellent, but the lectures which I heard

by Dr. Germain See could scarcely be called clinics. He simply related the history of a case, the patient not being present, and made remarks thereon. His observations were of a deeply philosophical character, very interesting, but not of great practical importance to students.

Two features of the instruction given in the final branches were particularly noticeable, the immense amount and variety of material, and the great number of didactic lectures, as well as the didactic character of the so-called clinics. To give some idea of the great variety of cases presented, I will relate briefly a lecture by Hallopeau. The subject was, "Tubercular Diseases of the Skin," of which he made the following classification :



After explaining the reasons for making this classification, he exhibited about twenty cases of such varied character that they illustrated almost every form given in the schedule. At the same clinic, bichloride of methylene was used very successfully as a local anæsthetic.

The Paris system, if not the best for the student, certainly tends to the development of the professors ; and on this account, France has always been noted for possessing some of the brightest stars in the medical profession. The great number of old men in actual work is also noticeable, as well as the slow and gradual advancement of the very brilliant younger men.

The subject of hypnotism still engages the attention of neurologists. Charcot does not give so much time to it as formerly, but every Thursday morning an exhibition is given by Dr. Luys, in the "Charité." Its practical uses are not yet well defined, and its possible abuses are so great that one hesitates before adopting it as a therapeutic measure.

The pleasure of attending lectures in Paris was very much enhanced by the presence of Professors Osler and Ramsay Wright, and Dr. Meyers, all Canadians, who were again experiencing the delight of students, sitting on hard benches and listening to medical discourses hour after hour. I will give in my next letter some thoughts of the German system of medical education, comparing it with the English and French system. Yours truly, J. E. GRAHAM.

UNIVERSITY MEDICAL LECTURES.

Editor of CANADIAN PRACTITIONER:

SIR,—Will you permit me, through the columns of THE CANADIAN PRACTITIONER, to make a few statements regarding the University of Toronto Medical Society Lectures? Many know already that the first course of these lectures, under the auspices of the above society, was delivered by Dr. E. C. Seguin last March. These lectures have now been reprinted in pamphlet form, and are ready for distribution to members of the society.

The advantages of being a life member are very considerable. In the first place, it brings all into close touch with one important department of the Provincial University. In the next place, it enables members to attend the annual course of lectures, and to obtain a copy of them when printed. It can be safely said that any one course of lectures is worth the entire fee for life membership.

The fee for life membership is fixed at $4, payable only once. Surely there is not a practitioner in the province who will not gladly embrace the opportunity of becoming a life member, and at once pay his four dollars to make up the fund needed to fully establish the work the society has undertaken ?

Although this is the first year of the course, the results have been most gratifying. Practitioners from all schools are becoming members and contributing their portion to the good work. To all who send in their names and fees, the recent lectures of Dr. Seguin shall be at once forwarded, and the lectures of the future as they shall appear. When we look around and see the zeal that permeates the alumni of some other universities, surely we may hope for good things from our own.

An early response is urgently requested. Address all communications to

JOHN FERGUSON.

264 College st., Toronto.

Births, Marriages, and Deaths.

BIRTHS.

PRIMROSE—On Saturday, July 26th, at 196 Simcoe street, Toronto, the wife of Alex. Primrose, M.B., C.M., of a daughter.

HASTINGS—On the 5th inst., at 256 Wellesley street, the wife of Dr. C. J. Hastings of a son.

MARRIAGES.

McLEOD—BRANDON—On August 6th, at the residence of the bride's parents, Cannington, by the Rev. C. W. Watch, Donald McLeod, Esq., M.D., of Duntroon, to Martha, only daughter of Christopher Brandon, Esq., of Cannington.

DEATHS.

BAXTER—On Wednesday morning, at his father's residence, 194 Spadina Avenue, John Gordon, second son of John Baxter, M.D., in the eleventh year of his age.

COLLEGE OF

Physicians and Surgeons

OF ONTARIO.

Medical Council Fall Examinations

SEPTEMBER, 1890,

IN TORONTO AND KINGSTON.

The written Primary and Final Examinations commence on Tuesday, the 23rd September, 1890.

By Order

R. A. PYNE, Registrar,

College Physicians and Surgeons of Ontario, Toronto.

N.B. Candidates' application forms may be had on application to the Registrar. The application is to be properly filled out and declaration executed, and delivered into the hands of the Registrar, accompanied by the tickets and certificates, and the Treasurer's receipt not later than the 17th of September, 1890. All candidates for Final Examination are required to present their primary tickets and certificates at the same time. Candidates for Primary who have attended a prior examination will require to pay a fee of $10. Candidates for Final who have attended a prior examination will require to pay a fee of $10.

The Treasurer's address is Dr. W. T. Aikins, 282 Jarvis St., Toronto.

University of Buffalo, Medical Department

BUFFALO, N. Y.

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HERBERT M. HILL, A.M., PH.D., Professor of Chemistry and Toxicology. Office—830 Main Street.

The Forty-Fifth Regular Session will open September 22nd, 1890, and will continue twenty-six weeks, and will be followed by a Spring Term of eight weeks.

Clinical teaching and laboratory work are especial features of the curriculum.

Fees: Matriculation, $5.00; General ticket, admitting to all lectures during any regular term $100.00; Perpetual ticket good for any number of Regular Terms, $150.00; Graduation $25.00. Spring Course free to matriculants of Regular Session.

For full information concerning the University or for Catalogue and Announcement, address

DR. CHARLES CARY, Secretary,

340 Delaware Avenue, Buffalo, N.Y.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, SEPTEMBER 1, 1890.

Original Communications.

HYSTERECTOMY FOR LARGE FIBRO-CYSTIC TUMOR.

BY A. B. ATHERTON, M.D., HARVARD, L.R.C.P. AND L.R.C.S. EDIN.

Lecturer on Surgery Woman's Medical College, Toronto.

Read before the Ontario Medical Association.

Mrs. M., widow. Youngest child 11 years old. Consulted me for the first time on August 27th, 1886. She was 49 years of age, and had usually enjoyed good health till the beginning of the present trouble three years ago Menstruation had always been free, and since the appearance of the tumor has been much more copious, with the exception of the last two periods, when it was scanty. During the first year, after it was noticed, the tumor grew very rapidly, and at the end of that time had attained nearly its present size. During the last two years she had been much troubled with swelling of the legs, with which she was at one time confined to bed for several weeks.

Present condition: Marked emaciation; pulse 90; feeble; a large, softish, solid tumor fills the abdominal cavity, most prominent above the umbilicus and thrusting outwards the thoracic walls; dull on percussion all over front and right side; no distinct sense of fluctuation anywhere; superficial veins somewhat enlarged, and some œdema in hypogastric region; circumference of abdomen, 45 inches. *Per vaginam*: Vaginal walls somewhat œdematous; cervix in normal position, widens out above into the tumor; sound passes five inches, somewhat backwards and to the right.

Treatment: Advised to try ergotine for the present, and wait for menopause.

Nov. 23. Menstruation continues regular. Measurement around abdomen, 40 inches; treatment continued as before.

May 20, 1887. No menstrual flow from November to April; then reappeared.

August, 1888. Has not varied much in size during the last fifteen months; menses irregular both in time and quantity.

August 10, 1889. Has been increasing in measurement again since last year; only one slight flow of blood during last six months; now girts from 46 to 48 inches; some œdema of genitals of late; also œdema of lower abdominal wall is greater than formerly, and there is distinct superficial fluctuation in flanks and epigastric region; sound enters 4¾ inches, somewhat to right side.

Patient is becoming more emaciated; pulse 92; feeble; complains of being unable to take much food because of a feeling of fulness; is troubled much with flatulence; during the last day or two she has suffered a good deal from pain about right ilium and groin, for which I was called to see her.

Operation advised and agreed to.

August 21. After careful preparation of the room and patient, the following operation was done, assistance being rendered by Drs. Burns,

Carson, and Dobie:—Incision from ensiform cartilage to the pubes; about two quarts of ascetic fluid escaped; tumor found free on anterior surface; a cyst at its upper part tapped, and about ten ounces of thin serous fluid drawn off. In right iliac region, at site of pain, which was felt ten or twelve days ago, the tumor was glued to parietes by soft adhesions, which easily broke down. Posteriorly the small intestine was closely and firmly united to growth at one point, requiring to be dissected carefully away with knife. Several catgut ligatures used to control bleeding from raw surface of wound. On left side the tumor was also closely connected with sigmoid flexure of colon.

After freeing the tumor, a wooden skewer about eleven inches long was thrust through its anterior surface and a thick piece of twine looped over its ends, thus affording a means of holding and steadying tumor while lifting it out of the abdominal cavity. Tumor found to grow from lower side of left body of uterus and from upper part of left cervix, the fundus being thereby pushed over to right side. As a better pedicle could be got by removing fundus and body of uterus along with tumor, it was determined to do this. The broad ligament vessels were ligatured in two places on either side, and an incision made between them so as to loosen up the parts, then a rubber tube was wound three times about neck of mass and tied; the tumor with uterus was now cut away, a knitting needle being thereafter thrust through stump to prevent any possibility of the tube slipping off.

The right tube and ovary were removed with the tumor; left not seen. A large number of silk ligatures were used to control bleeding from left side of stump, which extended two or three inches in this direction; main portion of stump was fashioned so as to come together in two flaps, one on either side of median line; then a continuous buried catgut suture was put in so as to bring the deep parts of flaps tightly together, and a half dozen or more silk sutures were applied along the peritoneal edge of the flaps, their ends being left long. By occasionally loosening rubber ligatures, other bleeding points were recognized and secured by ligatures. Finally, when no further hemorrhage of consequence occurred, the rubber tube was removed, and the stump stitched with catgut all around to edge of wound in peritoneum. The ends of the silk sutures which had been left long were now tied over a broad abdominal director placed transversely across lower end of abdominal wound, a glass drainage-tube introduced an inch or so above stump, and the abdomen closed by sutures; iodoform powdered over stump, and salicylated cotton applied to this part; a carbolized sponge was placed over the end of the drainage-tube in the usual way; and the upper wound dressed with bichloride gauze. A large amount of cotton wool was required to fill up the concavity in the epigastric region, lying between the expanded thoracic walls, which stood out on either side like a pair of wings.

Altogether the operation and dressing lasted about four hours, an hour being consumed in securing bleeding points after stump had been sutured. When put to bed, the patient's condition was good, pulse being only 84.

On examination the tumor was found to be smooth and round at its upper three-fourths. At the base, however, there were a number of out-growths from its surface, varying from the size of a walnut to that of the fist. Some of them were pedunculated. They consisted in large part of cysts, containing a slightly opalescent thin fluid. The weight of tumor was a little more than forty pounds.

Aug. 22, 9 A.M. Rested fairly well; has had two ½ gr. morphia suppositories since operation; pulse 88; temperature in axilla normal; some tympanites, and considerable raising of wind, but not much vomiting; ℥ij. of sulph. magnesia and ℥ss. ol. terebinthinæ administered as an enema in a cup of warm milk and water.

11 P.M. Bowels have moved freely, and tympanites is less; pulse 96; temperature 100°.

During the first week following the operation the temperature never rose above 100° in the evening, and it was but little above normal in the morning. Drainage-tube removed on the seventh day. All the sutures removed on the ninth day. On the evening of the ninth day the temperature suddenly rose to 101.2°, and on the following morning there was a slight discharge of pus from about stump, after which the temperature soon became normal.

Two weeks after the operation the silk ligatures (or sutures) which were fastened to the abdominal director were removed.

During the third week patient was moved to a couch; at the beginning of the fourth week sat up in a chair for half an hour; weighed 96 lbs. at end of 5th week; and went out of doors at end of 6th.

April, 1890. For some months after last report, patient was troubled off and on with soreness and some pain and induration about the sinus leading to stump, these attacks being generally followed by the discharge of one or more silk ligatures. There is a sinus still existing, leading down 2½ inches, but for three or four months it has given little or no annoyance. There is only a very slight discharge. She goes about everywhere when the weather is favorable, and weighs about fifty pounds more than she did five weeks after the operation.

Remarks: In the above report there are several points which seem to me worthy of remark. In the first place, the large size of the tumor makes it deserving of record, as there are comparatively few cases of recovery after removal of tumors of this character, weighing as much as forty pounds. Again, the fact that this fibroid tumor, after having diminished perceptibly in size, grew larger again after the apparent menopause, proves that the climacteric does not necessarily lead to the cessation of growth or disappearance of these neoplasms. I have met with another very large fibro-cystic tumor which brought about a fatal issue after fifty years of age. As a rule, however, there can be no doubt that the cessation of menstruation does favorably affect such growths. It seems probable from the cystic degeneration that was manifest in several portions of the tumor, that this is what led to its increased size during the year preceding removal.

I would call attention to the use of the wooden skewer to take the place of the broad cork-screw which Mr. Tait recommends to be used for the purpose of lifting out more readily and safely myomata of the uterus. It seemed to answer the purpose as well as, or even better than, any single cork-screw could have done in handling so large a tumor. Besides, it has the merit of costing nothing, which, in these days of many surgical inventions, is not unimportant.

As to the persistence of a sinus in the abdominal wall, I suppose there are still one or more silk ligatures inside. The sinus might be forcibly dilated and the ligatures thus got at and removed, but as it is giving the patient so little trouble I prefer to wait a little longer. If there should arise any considerable disturbance in the part, however, I would make an effort to find and remove the cause.

Finally, a few observations on the treatment of the pedicle (that much vexed question) may not be amiss. As you are aware, up to a very recent date, the methods employed have been two; viz., first, the use of a clamp or rubber ligature with fixation of the stump in the lower angle of the wound, termed the extra-peritoneal; and secondly, ligature of the stump by silk, followed by its being dropped back into the peritoneal cavity, as in the case of ovarian tumors, this being the usual intra-peritoneal method. Both have, in some hands, given good results. In Great Britain, most of the leading abdominal surgeons have preferred the former, while on the continent of Europe many have followed the latter plan. There are, however, objections to both. In the extra-peritoneal treatment by clamp or rubber ligature, although protection against hemorrhage is assured, yet there exists the danger which arises from the presence of a sloughing mass above the constricted portion of the pedicle. Again, when the stump is ligatured with silk and dropped back into the abdomen, we encounter, first, the risk of secondary hemorrhage from the shrinking of the muscular tissue included in the ligature, and furthermore, the danger of infection of the peritoneal cavity through the cervical canal. Sloughing of the pedicle seldom, if ever, occurs, and may be practically left out of consideration. In order to overcome these various difficulties, several modifications have been suggested and tried at different times. In the case above reported, I followed very nearly the plan pursued by Dr. Howard Kelley, as described in the April number of the *American Journal of Obstetrics* of last year. The chief point in which I deviated from his method was in the way of securing the ends of the silk sutures attached to the stump. Instead of tying the ends of the sutures over a director placed transversely, as I did, he seizes them in the bite of a forceps, and lays the latter back over the abdominal wound above.

It seems to me that Kelley's plan of treating

the pedicle is the best extra-peritoneal one yet devised. While it guards against hemorrhage by traction on the stump, and by having most, if not all, of the cut surface outside of the peritoneal cavity and therefore within constant observation, it minimizes or entirely avoids the slough which is produced by the constriction of the stump in a clamp or ligature. On the other hand, a longer time is consumed in securing the parts in this way than in the use of the clamp. This is not of so much importance where the patient's condition is good. A goodly number of surgeons are, however, still seeking after some more perfect intra-peritoneal method of dealing with the pedicle.

At a meeting of German gynæcologists last September, Martin reported two successful cases of hysterectomy for myomata, in which he enucleated the whole cervical stump. He claims that the unfavorable results obtained when the latter is dropped back into the abdomen, are chiefly due to infection from the cervical canal, and proposes to remedy this by its entire removal. Whether this opinion will be confirmed by future experience remains to be seen. Dr. Stimson, and some other American surgeons, have tried and speak well of the method.

Still another course of procedure has lately been recommended by Drs. Dudley and Goffe of New York, each of them having had four successful cases of hysterectomy. After the tumor and uterus have been cut away, and before the rubber ligature is removed from the stump, the peritoneum is dissected off from the latter and its muscular portion inside of the peritoneum, transfixed and firmly tied with a double silk ligature. Then the peritoneum is united over both muscular tissues and ligature by means of a continuous suture of catgut, thus placing them outside the peritoneal cavity. At the end of the fourth or fifth day, when suppuration has been established, as indicated by a rise of temperature to 101° or thereabouts, the cervical canal is dilated by means of steel sounds or a steel dilator, and the imprisoned pus and debris of sloughing tissue above the ligature allowed to escape. A metal drainage tube is then introduced, and antiseptic fluids are injected from time to time to cleanse the pus cavity. After from ten to seventeen days the silk ligature comes away, and the parts are soon healed. The chief objection to this method of treatment seems to me to be the disturbance of the patient at such a critical period after the operation. But its advocates state that the cervix at this date is soft and easily dilatable, and the dilatation produces so little pain that the administration of an anæsthetic is not required for the purpose.

PERI-TYPHLITIC ABSCESS.

BY A. GROVES, FERGUS.

Read before the Ontario Medical Association.

Peri-typhlitic inflammation, although comparatively rare, is still of sufficient frequency to render its considerations a matter worthy the attention of every member of the profession. It is only in recent years that the nature of the disease, its importance, and its appropriate treatment, have become thoroughly understood. My limited experience, I am quite aware, gives me no right in any way to speak with the voice of authority, seeing I have had only seventeen cases of peri-typhlitic inflammation, of which thirteen went on to the formation of abscess and were operated on, the remaining cases having terminated in resolution. My experience, however, may be of some slight value to the profession, for I have had the good fortune never to have lost a case either as a result of operation, or for the want of an operation.

It is commonly supposed that inflammation in the cæcal region results from foreign bodies having become impacted in the vermiform appendix, but although this is probably a common cause, it is by no means certain that it is the sole or possibly even the most frequent cause. This form of inflammation may arise from impacted masses in the appendix, or in the cæcum, or as a result of typhoid ulceration, and perhaps as a result of external injury.

The diagnosis is not usually difficult, for the increase of temperature, pain, and localized swelling are usually sufficient to indicate the nature of the disease. Tenderness is not, as a rule, very marked, although always present. The general abdominal tenderness of peritonitis is wanting. In a case of this kind the appropriate treatment is perfect rest, and thorough emptying of the bowels, if there seems to be

impaction in the cæcum, opiates to relieve pain and locally warm applications, if they are grateful to the patient. Bleeding, blistering, the inunction of mercurial ointment, and such like measures, are positively injurious, and can fill no useful indication.

Should resolution not take place speedily, or should the symptoms point to the probable formation of pus, an operation should be at once undertaken, for delay is, in such a case, particularly dangerous. It must be admitted that no positive rule can be laid down as to the proper moment for operating, that being a matter altogether for the judgment of the operator, but there can be no question that an early operation is, in every way, best. In my opinion the point at which the opening should be made is of the utmost importance, in order to avoid opening into the abdominal cavity. I am aware many surgeons speak lightly of opening the peritoneum, and too often have the courage of their opinions; but, although I have no morbid dread of intra-peritoneal surgery, nevertheless I retain a lingering respect for peritoneal integrity, and am old-fashioned enough to think that, other things being equal, it is better to keep outside the peritoneum. The rule I follow is to make an incision about two inches long, and not more than one inch to the inner side of the anterior superior spinous process of the ilium, dissecting down, using the surface of the bone as a guide until the abscess cavity is reached. I have found no advantage from using a drainage-tube, nor does there seem to be anything gained by elaborate antiseptic precautions; at the same time, if an iodoform odor tends to reassure the surgeon, it will be quite harmless. I have never had the misfortune of opening the peritoneal cavity in these cases, possibly because I have been especially careful to avoid doing so, nor have I ever had to perform a laparotomy for the purpose of washing the pus of a ruptured abscess out of the cavity, but if the abscess has already burst into the peritoneum an immediate laparotomy is imperatively demanded, for on this depends the sole hope of saving the patient. In my cases there were but four where there was actual communication between the bowel and the abscess at the time of operating, and in one of these about four square inches of gangrenous intestinal wall came away, rectal injections flowed freely from the wound and fæces were discharged, yet in a few weeks the parts were entirely healed, and the patient now enjoys perfect health.

In no case have I seen any after ill effects of the disease, nor have I known any case in which a second abscess developed.

ALCOHOLIC PERIPHERAL NEURITIS.

BY A. M'PHEDRAN, M.B., TORONTO.

In connection with the case of this somewhat rare affection, reported in THE PRACTITIONER of August 1st, by my clinical clerk, Mr. W. A. Barnhart, the following will prove interesting:

M. J. O'C., æt. 45, an hotel-keeper; a robust, well-built man; has taken strong liquors to excess for years, indulging even more freely than usual lately. When first seen in July, he was on the verge of an attack of *delirium tremens*. Alcohol was absolutely forbidden; milk and aerated water given as freely as possible, and some sedative medicine, to quiet his excitement. To induce sleep at night, sulphonal, grs. 35, was given at six o'clock, after some milk. He progressed favorably, the sulphonal giving him very good sleep, but his mental condition continued greatly "muddled"; it was with difficulty he could comprehend or follow any conversation. In a day or two he began to complain of his legs and feet feeling numb and painful; he said he had rheumatism in them. They were tender to pressure; no knee-jerk, but plantar reflex was present; he walked awkwardly. In a few days the hands became numb and painful also, but retained fair strength. The walking by this time became quite ataxic, and standing quite uncertain. The legs grew so weak that he could scarcely go down stairs. He could not be induced to walk out to a carriage. He continued much the same for about three weeks, when he gradually improved. The walking became steadier, and the legs stronger; the pains and numbness grew less, but still continued to trouble him considerably; still no knee-jerk, and standing is somewhat uncertain; the muscles of the legs are very soft and flabby. It was not convenient to test the electrical reaction. About the middle of August he walked about two hundred yards to the boat, to go across the

lake. It was with the utmost difficulty that he managed this walk, and reached the boat quite exhausted.

With excess in drinking alcoholic liquors so common, it is rather surprising that multiple neuritis is so infrequent, especially in the male. It is probable that many of the rheumatic cases among the intemperate are really mild attacks of neuritis. The disease was not understood generally until five or six years ago. It is said to be more frequent among the higher classes, whose nervous system is more highly developed.* The spirituous liquors, as brandy and whiskey, are most apt to produce the disease, and their long continued use rather than their excessive use for a short time. In arsenical neuritis, on the contrary, it is the acute poisoning, and not the prolonged use of arsenic, that usually gives rise to neuritis. This is well illustrated by the case published in THE PRACTITIONER of January 1st, 1890.

The result of the distinctive symptoms is usually sudden, being preceded, however, by the usual signs of excessive drinking, as gastritis, insomnia, etc. The symptoms consist in various disturbances of sensation, motion, and nutrition, in the parts supplied by the affected nerves; and while the feet and legs, especially in their extensor muscles, are usually the earliest and most frequently involved, yet the disease may affect any nerve or group of nerves. Paralysis of one arm, of the respiratory muscles, of the muscles of deglutition, and, in one instance, of the external recti of the eye-balls,† has been met with.

The disease is not only erratic as to the part that it may attack, but is so especially in the manner in which it affects any particular nerve, for, in even a small nerve, fibres in a very advanced stage of neuritis, and perfectly healthy ones, may be seen in microscopic sections side by side.‡ This explains the absence of the deep and superficial reflexes, the latter not being lost, however, in some cases. It also explains the frequent persistence of Faradic irritability, although requiring a stronger current to induce response at the same time that the galvanic current shows commencing degeneration. The diagnosis is usually not difficult, if the association of symptoms, the causation and progress, are taken into account. The liability is, of course, to ascribe the phenomena to some lesion of the spinal cord. The ataxia, loss of knee-jerk, pains, inability to stand with the eyes closed, optic neuritis, etc., may occur in multiple neuritis as well as in tabes dorsalis. In the former, however, the symptoms develop much more rapidly; there is numbness and anæsthesia: sensation of part being "asleep"; weakness and tenderness of the muscles, with some degree of atrophy; and tenderness along the nerves—these will be sufficient to distinguish it. Very severe cases of neuritis, with complete paralysis and rapid wasting, may easily be mistaken for anterior poliomyelitis; but the onset is slower, with numbness and pain, tenderness along the course of the nerves and in the muscles, and the gradual invasion of fresh groups of muscles, instead of widespread sudden paralysis, followed by early improvement in all except those that undergo atrophy.

The prognosis, if the cause be removed, is good, unless the health be undermined by excesses. For treatment, in ordinary cases, little requires to be done except good general care. The salicylates have been recommended in the early stage; given freely, as in acute articular rheumatism, they are said to be of marked benefit. Exalgine, in doses of one or two grains, given as needed to relieve pain, will be found useful. For the same purpose, antipyrin and phenacetine have been used. The former may produce dangerous depression. The diet should be carefully regulated; at first, milk will be sufficient, and to render it more easily digested, it should be diluted with seltzer, vichy, or soda water. This furnishes the fluid for free diuresis, by which the excess of excreta in the blood is eliminated. Alcohol should be promptly stopped. If a stimulant is needed, some other, as digitalis and spiritus æther. comp., should be given. The utmost vigilance will be needed to prevent secret drinking; if satisfactory recovery is not being made, this will usually be found to be the cause. If pain is severe, gentle rubbing and hot fomentations are of use in soothing the parts. Warm baths aid not only as local sedatives, but also in quieting the patient and inducing sleep.

* M. Allen Starr, *Medical Record*, 1887.
† Buzzard, in *British Medical Journal*, Vol. I., 1890, p. 1420.
‡ Hale-White, Trans. Lond. Path. Soc., 1887.

After the acute stage is passed, the object of treatment is to promote repair in the diseased nerves, and to prevent muscular waste. Both of these objects are best attained by warm baths, massage, and electricity. These measures stimulate the circulation, and thus maintain nutrition and promote the reparative processes. The administration of arsenic and strychnine, in small doses, will also prove useful.

Selections.

REMARKS UPON A CASE OF EMPYEMA, COMPLICATED WITH PLUMONARY ŒDEMA.

BY FRANCIS HUBER, M.D.

Read at Section of Pediatrics (Academy of Medicine), New York.

Though the subject of empyema has but recently been discussed before this section, I have taken the liberty to present the following case, in order to direct attention to a not infrequent complication, and to lay stress upon a practical point in the management of cases complicated with œdema of the other lung.

The little patient, Jesse W., aged twenty months, was referred to me, through the courtesy of Dr. D. Cook, December 5, 1889. Unfortunately, I was not able to see the child until midnight, though notified earlier in the evening that effusion was present with œdema of the other lung. I found the patient, who had been ill sixteen days, in a very precarious condition, extremely restless, tossing about wildly and crying incessantly. Marked orthopnœa present during a number of hours. Face and extremities cyanosed; pulse feeble; limbs cold; eyes sunken and heavy. Several drachms of brandy were given, and the child, seated in its mother's lap, was aspirated, and about six ounces of purulent fluid drawn off, very slowly, through a small needle. Though the breathing became easier, the general condition was bad. The child was at once placed in bed with the head low, hot bottles being applied to the extremities, and warm applications over the præcordial region. Very soon the little one rallied and grew quiet, a little later fell asleep, and passed a fairly comfortable night. The next day, as the child had gained ground and looked considerably better, it was determined to operate, the œdema of the other side having subsided. Accordingly, assisted by Dr. Cook, the child was placed upon the healthy side, and without an anæsthetic, the chest was incised posteriorly below the angle of the scapula, and a drainage-tube inserted. The cavity was now irrigated with hot water and an antiseptic dressing applied. Irrigation was subsequently employed once or twice to wash out some lymph masses. A sheet of rubber, several inches square, was placed over the drainage-tube to act as a valve. This innovation, however, did not impress Dr Cook or myself very favorably, and was dispensed with after a few days. The subsequent course was favorable, and in less than four weeks not only had the lung expanded fully, but even the integumental wound had healed.

Hyperæmia or congestion of the lungs is a very grave complication, which may result in œdema and even cause free albuminoid and frothy expectoration, often terminating in asphyxia and death by suffocation, œdema pneumonia serosa of Traube—acute albuminoid expectoration of the French authors.

When pulmonary œdema occurs as a complication of purulent pleurisy, it adds to the gravity of the case, and may be the immediate cause of a fatal termination. The treatment should be prompt and bold. Stimulants of various kinds must be administered and the chest aspirated without delay. The quantity to be drawn off must necessarily vary with the circumstances of the individual case. Even in simple cases of effusion there is ordinarily greater or less danger of producing fresh congestion and hyperæmia of the lungs in removing large quantities of the effusion. It must not be lost sight of, that our purpose is to relieve the intrathoracic pressure, to free the overburdened heart, and to remove the symptoms of oppression. As has been well said, "slnwness in the withdrawal of the fluid, as well as the small quantity drawn, lessens the probability of any unpleasant effect." Bowditch says, "I always draw with great deliberation. I pull so lightly upon the handle of the piston that it seems as if the fluid itself were pressing out from the chest and pushed the piston upwards, my hand simply following the impulse."

If this be true of an uncomplicated case, the lesson applies with far greater force to a case in

which the danger to be avoided already exists and presents itself to us face to face. Some years ago, after reading of a number of cases of empyema cured by aspiration, I was in the habit of withdrawing large quantities, and did not meet with any bad effects in ordinary cases of purulent effusion. In several instances in which œdema was present upon the other side, though the aspiration was slowly conducted and the patients stimulated, the œdema progressed, and the cases resulted fatally within thirty-six hours. It is true, the cases were unfavorable, œdema of the lung being well marked, but, in the light of subsequent experience, I am forced to concede that had the quantity drawn off been less, the circulatory change would not have been so extreme within a comparatively short time, and the failing heart might have regained its tone, and the termination perhaps been made favorable. Since then three other cases of empyema with pulmonary œdema have come under my observation. From four to six ounces of pus only were drawn off, the patient stimulated, and the heart allowed to regain its force; the pulmonary œdema gradually subsided within six hours, and, as in the case reported above, subsequent incision with drainage was practised, followed by recovery. The complication in my experience occurs rather in the acute suppurative pleurisies, in which class, as a rule, the constitutional symptoms are severe, the effusion of liquid rapid, and the heart's action greatly enfeebled. It occurs rather early, too, in the history of the case; sometimes within one or two weeks. I have not observed it in the subacute or chronic variety, where the heart has an opportunity to accustom itself gradually to the extra work demanded.

Its mode of onset, too, may be rather sudden. A child three years old was left fairly comfortable on the morning of the seventh day; unforeseen circumstances prevented the evening visit. During the night I was called out, and found the patient suffering from orthopnœa, cyanosed, with the usual symptoms of extreme "air hunger," due to marked œdema of the other lung. I was compelled to aspirate at 3 a.m. and drew off about four ounces, sufficient to relieve the urgent symptoms. The same afternoon, when Professor Jacobi saw the case in consultation, the danger was over. A few days later the child was operated on and recovered perfectly.—*Archives of Pediatrics.*

A CASE OF GUNSHOT INJURY, IN WHICH A PIECE OF LEAD REMAINED EMBEDDED IN THE SKULL FOR THIRTY-ONE YEARS

By DAVID M. GREGG, M.B., F.R.C.S. Ed., Dundee.

The following case is, I think, worthy of being recorded, on account of the length of time the piece of lead remained in the bones of the skull, the few symptoms to which it gave rise, and the difficulty which was evidently experienced in attempting its removal.

Sergeant D. C., formerly of the 2nd Bengal European Fusiliers, formed one of a storming party at the siege of Delhi, on 14th September, 1857. He was running towards the walls with his head bent down in the act of loading his musket, when he was struck on the head by a leaden bullet. He was rendered unconscious for a minute or two, but soon recovered consciousness, and while a comrade was bandaging the wound, he received a wound from a musket shot in the left forearm. He was taken to the field hospital, where a round musket bullet was extracted from his left forearm, and where the surgeon "found the skull fractured and raised up, and he replaced it." No further attention seems to have been paid to the head injury, and after a stay of three months in hospital, he returned to duty, the wound in his head not having healed. Soon after this a native barber, while shaving the scalp round the wound to facilitate dressing, discovered a piece of lead sticking firmly in the wound. The patient then returned to hospital, where two unsuccessful attempts were made to remove the foreign body. On account of this injury he was discharged from the army in 1859, and soon afterwards came to Dundee, where he obtained work in a calender. This work, however, he was soon obliged to abandon, as any attempt to lift heavy weights made the wound bleed rather freely. From then till his death he was employed as a gatekeeper. The wound never entirely healed.

He first came under my notice in 1880, and at that time he had an open wound about the size of a shilling on the vertex in the line of the

saggital suture, just behind its junction with the coronal suture. The wound was surrounded by cicatricial tissue, and presented a few weak granulations. In the floor of the wound, firmly embedded in the skull, was a piece of lead about a quarter of an inch in diameter. This could be scratched with a knife, and gave the characteristic mark to Nelaton's probe. There was a slight purulent discharge from the wound, but otherwise he suffered no inconvenience from it. Venous oozing accompanied by giddiness and faintness occurred on the patient making any extraordinary effort, especially if made in the stooping posture. As any pressure on the lead caused considerable oozing, and as the patient was averse to any operation, no further attempts at removal were made. From this time till his death, which occurred in 1888 from an abdominal complaint, there was little change in the above condition, except that the cicatrix became slightly more depressed from absorption of the surrounding bone. Evidently the bullet had struck the right parietal bone obliquely, about three-quarters of an inch from the coronal and half an inch from the sagittal suture. It had passed backwards and to the left, grooving the bone until it reached the saggital suture, where it had produced a depressed fracture, the portion displaced being about the size of a shilling. In the posterior and deepest part of the depression, firmly embedded in the bone, and exactly above the superior longitudinal sinus, was a piece of lead four-tenths of an inch long, and one-tenth broad. Close to the piece of lead was a small foramen, which allowed the passage of a small vein to the longitudinal sinus. Probably after producing the fracture the bullet had split, and the smaller portion had remained embedded in the bone. Originally the piece of lead must have been considerably larger, as on many occasions small pieces had been removed by scraping with a knife. The sagittal suture in the neighborhood of the fracture had been considerably obliterated.

The inner surface of the skull presented a prominent irregularity, corresponding to the depression seen on the external surface.—*Edin. Med. Jour.*

EXCESSIVE VOMITING DURING PREGNANCY.—B. C. McDougall, M.D., in *Mass. Medical Journal.*—I was requested to see Mrs. P., who was in the sixth month of pregnancy and could not retain anything on her stomach—no food and no drink. She had consulted two medical gentlemen, one of whom had advised purgation, which was tried, as were also the various remedies recommended in such cases, but all had been of no avail. The other physician, who was subsequently called in, concurred in the opinion that she was in great danger; advised a certain course, but would not consent to the procuring of abortion, as the fœtus was not viable, and he was a zealous adherent of the Roman Catholic church.

I prepared to do whatever was necessary to save the mother, or both fœtus and mother, if it could be done. I found the pulse 96; incessant nausea; vomiting whenever anything was taken into the stomach; sleepless at night and also during the day; no delirium, no tinnitus aurium; no dimness of vision. I claimed a delay of twenty-four hours to try two remedies. One was the hypodermic injection of morphia over the region of the stomach, and the other was the injection of beef essence and brandy into the rectum. On the next day I found that the remedies had done no good. She vomited, as ever, the little ice-water she took, and the injections could not be retained at all.

My mind was now made up as to the course to be pursued, and I examined the neck of the womb with my finger. I could readily introduce the index finger into the os tincæ and carry it up to the internal os, and the examination convinced me there was granular erosion of the cervix. Nothing effective could now be done, short of abortion; the method of procedure was the only question. To dilatation by means of tents, there were these objections: it is slow in its operation; and in this particular case, the pathological condition would lead to a metro-peritonitis, or to a pelvic cellulitis. I have seen these arise after dilatation, even when there was no granular erosion of the cervix, nor any other lesion of that part of the womb, and when dilatation was practised for other objects. The detachment of the membranes according to the method of Kiwisch is also objectionable on account of its slowness and uncertainty.

I determined to puncture the membranes, and for the following reasons: the child was not viable and could not be saved. I have

known cases, when the child was viable, as in the eight or ninth month of pregnancy, and when I brought on premature labor to allay excessive and uncontrollable vomiting, that the vomiting did cease, almost immediately after the rupture of the membranes and before emptying of the uterus. With a small sized uterine sound, I punctured the membranes. In an hour after the operation, she took, with decided appetite, some beefsteak and retained it; at night she did the same, and when I saw her in the morning, she and her mother informed me that she had slept well, and that she had a good appetite, having eaten various things for breakfast. About forty-eight hours after the operation, fœtus and secundines came away, and she made a rapid recovery.

I am aware that there is high authority against the emptying of the uterus in cases of excessive vomiting during pregnancy. I am aware, too, of the sudden and favorable changes which sometimes take place in such cases. The experienced physician can often foresee that such will be the result, and he will persevere with his remedies. I will admit that it does happen, even when he despairs. But it also happens, that although our patient occasionally gets well when we expect them to die, on the other hand they sometimes die when we expect them to get well. We must reason from a general rule and not from an exception.

The only authority I will quote is that of Tyler Smith: "When all other means fail, and when the exhaustion of the patient cannot be arrested, the remedy is the emptying of the uterus, and this should never be delayed so long as to put the patient in a state of imminent peril. Nature herself often terminates the distress by spontaneous abortion. It has happened to me to have been twice consulted, within a recent period, in cases in which the induction of premature labor artificially was so long delayed that the patient had died before abortion could be induced. Paul Dubois has stated that he met with twenty fatal cases in thirteen years. It is a reproach to our art that such cases should occur."—*Archives of Gynæcology and Obstetrics.*

THE USE OF SPIRITS AND MALTED DRINKS IN NURSING WOMEN.—Dr. Jacobi opened a discussion on this subject at the recent meeting of the New York Academy of Medicine (Section of Pædiatrics.) He thought the question intimately connected with that of diet generally, as to whether it was possible for foreign substances in the blood to get in to the secretions of the mammæ, and from there into the digestive organs of the baby. The speaker then dealt at length with the whole subject of the chemical and physiological experiments on milk secretion. He pointed out that the character and quality of the breast secretions of the mother were subject by many causes to continual variation. As long as the milk was a real secretion there was little danger that any deleterious matter which might be floating in the blood would get admixed with the mammary secretion; but as soon as the woman became anæmic or got below par the secretion would no longer be simply milk, but part of it would be serum and other material foreign to its normal composition. Whatever floated in the serum would find its way into the mammæ and into the baby. This could be seen when we compared colostrum with milk. Conditions of the mother's milk, which in the later months of the child's nursing life would be absolutely devoid of danger, might, immediately after birth, and while the milk still contained colostrum, produce much mischief.

Discussing then the subject of alcohol, the speaker said that the difficulty at once presented itself as to the woman's exact condition. Some women could take a certain quantity of spirits, while a feeble person taking the same quantity might produce results deleterious to the baby. It had been stated that the nursing woman must not have spirits, but that she must have beer. Most of those who insisted on this point were the nurses themselves. Blood saturated with alcohol could not be good nutriment for the fœtus, and the same was true of the baby; and supposing the milk secreted to be, from any disturbance in the health of the mother, partly serum, then alcohol taken by her would certainly be found in the mother's milk. It might be true that this could only be urged in the case of those who were habitual drunkards, but he saw in the best families wet-nurses who would get drunk, and who would in that way be certainly likely to injure the baby. It has been stated, among other things, that alcohol

increased the quantity of milk secreted. This has been also denied. There was only one remedy which, in the speaker's knowledge, would influence the secretion of milk and cause its increase, and that was salicylate of sodium. Alcohol, when taken, acted as the carbohydrates generally did. It had a certain amount of nutritive action, but when given in larger quantities it was not utilized in the milk production. This disposed, in the speaker's mind, of any idea of the necessity of giving malt liquors or spirits. There might, however, exist a necessity for its use on general medical principles. When stimulation was required, wine or beer might be indicated. The most that could be urged in favor of its general use was that a small quantity, if regularly given, would not be harmful. If it was expected that the hops in beer would act as a stomachic, it might be given with two or three of the meals. Whatever the carbo-hydrates in alcoholic drinks could do might be done equally well by carbo-hydrates administered in some other form. Whatever beer could do might be done just as well by milk and farinaceous foods, both supplying the large amount of albumin necessary. A woman who was not nursing required ninety grammes of albumin daily, and one who nursed one hundred and sixty grammes. A greater amount of milk and farinaceous food in the woman's diet would supply this extra seventy or eighty grammes. He should prefer those foods which contained a large amount of albuminoids, such as oatmeal and barley.—*N. Y. Medical Journal.*

PRINCE BISMARCK AS A PATIENT.—Prince Bismarck used to have the reputation of thinking anything but nobly of the medical profession, and his differences of opinion with the late Professor Frerichs as to the pathology and therapeutics of that important political organ, the liver, were expressed in language more familiar perhaps to scientific controversialists than to diplomatists. It is probable that the great statesman was a refractory patient, but bitter experience seems to have taught him that throwing physic to the dogs is not the most satisfactory treatment for the growing infirmities of age. He is now, according to a statement which he recently made to a representative of the *Daily Telegraph*, a model patient, paying the most exemplary obedience to the counsels of his medical adviser, Professor Schweninger. The Prince some years ago was in some danger of becoming the largest, as well as the greatest, man in Germany, but Dr. Schweninger relieved him of the growing load of "too, too solid flesh," by the judicious application of Oertel's method, which has been made known to English readers by Dr. Mitchell Bruce and others. The details of the Prince's present dietetic regimen may be interesting to those interested in the treatment of obesity. He says :—"I am only allowed to drink thrice a day—a quarter of an hour after each meal, and each time not more than half a bottle of red sparkling Moselle, of a very light and dry character. Burgundy and beer, both of which I am extremely fond of, are strictly forbidden to me ; so are all the strong Rhenish and Spanish wines, and even claret. For some years past I have been a total abstainer from all these generous liquors, much to the advantage of my health and my 'condition,' in the sporting sense of the word. Formerly I used to weigh over seventeen stone. By observing this regimen I brought myself down to under fourteen, and without any loss of strength—indeed, with gain. My normal weight now is 185 lbs. I am weighed once a day, by my doctor's orders, and any excess of that figure I at once set to work to get rid of, by exercise and special regimen. I ride a good deal, as well as walk. Cigar smoking I have given up altogether ; it is debilitating and bad for the nerves. I am restricted to a long pipe, happily with a deep bowl, one after each meal, and I smoke nothing in it but Dutch Knaster tobacco, which is light, mild, and soothing. Water makes me fat, so I must not drink it. However, the present arrangements suit me very well." Had Prince Bismarck shown himself as amenable to medical control in his robust prime as he finds himself compelled to be now, he would not perhaps have to submit to so strict a rule of life in his declining years.—*Brit. Med. Jour.*

COLLAPSE FOLLOWING THE INTERNAL ADMINISTRATION OF SALICYLATE OF SODIUM.—By A. G. Auld, M.D.—But few drugs, old or new, have escaped trial in the special treatment

of chronic and subacute articular rheumatism. The effect of the salicylate of sodium (as sometimes prepared) in the following two cases is interesting in view of certain recent experiments: J. M. had been under treatment for subacute rheumatism for six months, in another part of the country, without deriving any benefit. On May 1st, 1889, I prescribed for her 100 grains daily of salicylate of sodium. On the 4th, she complained of giddiness, confusion of ideas, and weakness. On the 5th the giddiness was excessive, and the patient was unable to get out of bed. The next day, having now taken 600 grains, there were delirium and prostration. The drug was now stopped, and when the patient regained her faculties the joint symptoms had disappeared, and did not return. H.C. had for years suffered from articular rheumatism, chiefly in the lower extremities. On May 24th, 1889, I prescribed 100 grains daily of the salicylate of sodium, which was supplied by the same chemists as in the previous case. On May 30th, I was summoned at midnight to the patient, who was said to be dying. Briefly stated, his symptoms were—great and stridulous dyspnœa, extreme slowness of the pulse, and general paralysis, the patient being unable to speak. Delirium was not so marked, however, as in the other case. After appropriate treatment, he recovered, and his malady was considerably relieved for a time. I think it worth while notifying these cases, as the symptoms present such a striking similarity to those experimentally induced in the rabbit, by Professor Charteris, recently described in *The Lancet* and elsewhere. It was shown in these experiments that an element of high toxicity could be isolated from the artificial compounds commonly in use. Professor Charteris has kindly given me further information on the matter, and has shown me various specimens of the purified drug. Since then, I have had opportunities of witnessing the exhibition of much larger doses of the drug so purified, without any untoward results.—*Lond. Lancet.*

OVARIAN CYST REMOVED DURING PREGNANCY.—At the sixth Congress of the Italian Surgical Society, held in Bologna, in April, Dr. Angelini related the details of a case in which he removed an ovarian cyst from a woman five months pregnant, whose pregnancy was learned for the first time during the operation. The pregnancy ran a normal course from the time of the operation, and delivery took place fifty-five days after. With the exception of a somewhat slow involution of uterus, the puerperal period was quite normal. At the time of the communication the woman was quite healthy.

Loreta's Operation.—At the same Congress, Prof. Loreta, of Bologna, communicated the details of two cases of narrowing of the cardiac and pyloric ends of the stomach, on whom he had operated according to his own method. The first case was one of stricture of the pyloric end of the stomach, with gastric pain, which had been going on for eight years. The patient used to vomit seven hours after meals. The vomited matters presented the three layers described as characteristic by Loreta. On examination, dilatation of the stomach was found, with gurgling noises, but no tumor on the palpation. The abdomen was opened in the median line, the stomach incised, and first one finger, then two, were introduced into the opening, and passed in the direction of the pylorus. The stricture was stretched by the fingers. The patient recovered, and to-day enjoys good health. The second patient suffered for twenty years from a stricture of the cardiac end of the stomach, with the formation of a large sacculated dilatation of the œsophagus above the stricture. The walls of the abdomen and stomach were incised, a dilator was passed across to the cardiac end, the stricture was dilated, and an œsophageal bougie was passed down from the mouth. The patient recovered, and is now (two months after the operation) in good health.—*Dr. Johann Baaz, of Graz, in Medicinisch Chirurgisch, Rundschau, June 1st, 1890.*

UTERINE VOMITING INDEPENDENT OF PREGNANCY.—Much has been written of late years on the subject of vomiting of pregnancy, and its most aggravated form, hyperemesis gravidarum, or uncontrollable vomiting. Dr. P. Lamy has recently written on cases in which troublesome vomiting has been observed as associated with other phenomena of the female generative system besides pregnancy. He began with a case of vomiting at puberty. A girl, aged fourteen, suffered severe pain before her first period. After that period the pain ceased, but an attack

of vomiting followed every meal. No drugs were of any avail, and the patient had to be fed with a drachm of beef-tea every half-hour. When the menses became regularly established the vomiting ceased, and did not return during the first pregnancy, six years later. Dr. Lamy related two obstinate cases of vomiting during the period in adult women. In one, vomiting invariably followed sexual intercourse. The patient became pregnant, but after she bore a child, the vomiting always returned under the same circumstances as before. Treatment proved unsatisfactory. Lastly, Dr. Lamy noted a case of vomiting at the climacteric. The patient was fifty years old, the period was becoming very irregular, and occasional disturbances of the alimentary canal, especially vomiting, set in. Treatment, as in ordinary dyspepsia, gave relief. This last case might be explained by many physicians as simple gastric catarrh, due to errors in diet or other causes, rather than to changes in the uterine functions. It is clear that the vomiting of pregnancy is very common and almost normal, in the sense that a certain amount of hemorrhage at delivery is normal. On the other hand, vomiting at puberty, during menstruation, after coitus, or about the menopause, must be considered abnormal.—*Brit. Med. Jour.*

A CASE OF EXTENSIVE DROPSY DURING PREGNANCY.—The following case is reported because of its comparative rarity: A primipara, seven months pregnant, was suffering from dropsy of the lower extremities, and of the external genital organs. The legs and feet were swollen to an enormous size. The vulva was extremely œdematous, particularly the labiæ minoræ, which were as large as a hand, translucent, and were extremely tender on pressure. The urine was scanty and albuminous. Rest in bed and the internal use of Epsom salt and cream of tartar rapidly reduced the effusion in the legs, but had not the slightest effect on the swollen genitalia. After persisting for a few days, I punctured the organs, with excellent results, the labiæ diminishing to almost normal size. Patient was then put upon tincture of the chloride of iron, and was apparently doing well. About five days after this I was summoned, found her in labor, and delivered her of twins, one of which died in a few hours; the other is still living. The patient made a rapid and complete recovery. Lusk speaks of six cases of dropsy in pregnant women treated by him, in which miscarriage followed puncturing the labiæ. Whether labor was brought on by the reflex effects of the operation, or by the condition that caused the œdema, is a question on which I desire an expression of opinion.—*J. E. Covey, M.D., in Med. News.*

THE COLOR OF NEGRO INFANTS.—Several histologists of authority, including Kolliker, have taught that the skin of the negro infant is not pigmented at birth, although the color, distinctive of the race, is rapidly developed in the course of the first few weeks of extrauterine life. In Europe the chances of observing a large series of pure-bred negro infants are rare. In the United States it is otherwise. Dr. Morison, of Baltimore, has made use of his opportunities of observation, and has shown, in consequence, that the current opinion as to the complexion of the negro at birth is quite erroneous. He examined the skin of the arm of an eight months' fœtus, whose father was a negro, and mother moderately dark-complexioned. Pigment was found in the lowest layers of the rete mucosum. He also detected pigment in the skin of a mulatto child, who had died about thirty-six hours before birth. Dr. Bowen, writing in the *Boston Medical and Surgical Journal*, on Dr. Morison's researches, adds a notice of his own observations. A few years ago he enjoyed the opportunity of inspecting, at the Boston Lying-in Hospital, a considerable number of negro and half-caste children at, or soon after, birth. The color of the skin was found to vary within a wide range. The pigmentation was marked from the first in all cases where the skin of the parents was very dark. The old, or European, opinion is true of infants with a considerable infusion of white blood. They are white-skinned at birth, but pigment is deposited in the rete mucosum within a few days.—*Brit. Med. Jour.*

THE CREMATION QUESTION IN AUSTRIA.—The Supreme Sanitary Council of Austria had the cremation question brought before it for the first time at a recent meeting. The family of a

man, whose body had been cremated in Italy, had applied to the authorities for leave to keep the ashes in their house. Such a petition being altogether without precedent, the authorities were greatly perplexed how to deal with it; they had ordinances and regulations of all kinds as to burial, and as to the preservation of bodies or parts of bodies for scientific purposes, but the forethought of legislators had made no provision for the disposal of the ashes of cremated ancestors. The question was accordingly referred to the Minister of the Interior, who thereupon asked the opinion of the Sanitary Council as to the hygienic aspect of the matter. That body, after due deliberation, passed a resolution to the effect that the ashes might be kept in the house without danger to health. This is the first public pronouncement of the Austrian Sanitary Council in any way relating to cremation. Though it was careful not to commit itself officially on the general question of the expediency of cremation, individual members expressed their approval of this way of disposing of the dead, from a sanitary point of view, while leaving the legal and religious aspects of the question to be dealt with by the proper authorities.—*Brit. Med. Jour.*

HÆMATEMESIS IN A NEW-BORN INFANT.—Mr. H. C. Hodges, of Watton, has published the notes of a case, under the care of his father, of hæmatemesis in a new-born child. The child, after a perfectly natural and easy labor, was born at 5 a.m. At 11 a.m. a very urgent message came that the child had hemorrhage. It was found to be blanched, and the pulse very feeble, and the clothes were saturated with bright blood, which had been vomited. Absolute quiet was enjoined, and ten minims of hazeline every two hours were ordered. There was no more hemorrhage, but about a tablespoonful of blood-stained mucus was vomited at 5:30 p.m. Hiccough had been constant since the morning. There was also one rather copious evacuation of blood, besides meconium. The next day the hiccough was less. There was a slight serous discharge from the left ear, and subconjunctival hemorrhage of the left eye. On the second day after birth there was internal strabismus of the left eye. After the third day, the symptoms rapidly disappeared, and the child got quite well. Mr. Hodges was disposed to think that there had been some injury to the vessels at the base of the skull.—*Lond. Lancet.*

SULPHO-CALCINE IN DIPHTHERIA.—A case of diphtheria came into my hands recently, which had been resigned as past hope by the former physician. The event fully justified his opinion. This case presented a difficulty sometimes met with, where the preparation of iron and nascent chlorine, upon which I usually rely, proved too strong for the child's mucous membranes, while it could not destroy the diphtheria when diluted. The day before the child died, her brother, 18 months of age, was seized with the same disease, in a malignant form. Knowing that it would be useless to rely on the chlorine mixture, a trial having shown the same effect as in the older child, I determined to employ sulpho-calcine, Dr. Love having reported favorably upon it. The liquid was applied in full strength to the false membranes, while the mouth, throat, and nose (which began to discharge ominously) were washed out hourly with as strong dilutions as they could bear. The child recovered, although slight epistaxis occurred, showing how grave was the nasal affection. The remedy deserves a further trial.—*Philadelphia Times and Register.*

GONORRHŒA OCCURRING IN A BROTHER AND SISTER AGED RESPECTIVELY SIX AND EIGHT YEARS.—Dr. T. M. Bull reported the cases to the New York Academy of Medicine. The first patient, a boy aged six, was brought to the clinic February 6, with a urethral discharge dating from about Christmas. Pus flowed from the urethra which, on examination, was found to contain numerous gonococci. Five days after the visit of the boy, the sister, aged eight years, was brought to the clinic, with a discharge which had been discovered about January 8. There was considerable swelling of the vulva and flow of pus from the vagina, which was found to contain gonococci in numbers. Both cases were completely cured by March 1. It was probable the boy had got gonorrhœa from his uncle, with whom he slept and who had the disease, and later the sister got it from the boy, since intercourse was acknowledged by both

parties. The boy was strong, active, rather large for his age, and unnaturally intelligent regarding matters which boys of his age should know nothing about.—*Archives of Pediatrics.*

CASE OF VISUAL DISTURBANCE CAUSED BY A TAPE-WORM. By Dr. G. Guiot *(Année Méd. de Caen, February, 1890, Alleg. Med. Central Zeitung).*—A young woman exhibited nervous disturbances for more than a year connected only with the sense of sight. Although on inspection the eye appeared to be quite normal, the patient complained of a feeling as of a foreign body in the conjunctival sac, of burning sensations, rubbing, etc. If she attempted to do the simplist work (reading, sewing), she became dizzy and complained of a violent headache ; artificial light was borne with difficulty. The acuteness of sight seemed rather below the normal. Examination of the fundus revealed nothing abnormal. There was no trace of hysteria. The above mentioned symptoms were constant and not intermittent as in hysteria. After the patient had passed a tape-worm, two metres long, all the disturbances disappeared, and the patient was completely and permanently cured.—*Medicinisch Cherurgische Rundschau, June 1st, 1890.*

THE EFFECT OF OPIATES ON GASTRIC SECRETION.—According to the *Lancet*, Dr. Abutkoff has examined the effects of opium and two of its alkaloids on the digestive functions of healthy people. He found that the three substances experimented with—viz., opium, morphine, and codein—all exert a retarding action on gastric digestion by diminishing the general acidity of the gastric juice. Neither the quantity of pepsin nor the absorbent power of the stomach appeared to be affected by any of the three substances. As to their relative effects in such doses as can be given medicinally, opium had decidedly the most marked influence, and codeine the least. Dr. Abutkoff suggests that in the case of patients with weak digestion, due to deficiency of acid in the gastric juice, opiates should be given some hours after a meal, but that where the hydrochloric acid is excessive, they may be given with meals.—*Medical News.*

A NEW AND RAPID TEST FOR SUGAR.—A simple and ingenious test for saccharine in urine, by Dr. Becker, of Cairo, was brought before the Surgical Society of Vienna at its last sitting, by Professor Nothnagel. Ordinary visiting cards contain a considerable quantity of potash. Such a card is dipped with a solution of oxide of copper and dried. Sulphate of copper is then to be seen on the paper in minute crystals. Paper so prepared can be carried in the pocket. When urine has to be tested, a point of wood—match end—is dipped into it, or two or three strokes are made with it on the prepared paper. The paper is then passed two or three times over a lamp, and immediately the marks scored will take on a more or less distinct brown color if sugar be present. Normal urine does not cause any change if marked on the paper in the way described, and it is a useful way of confirming the proof, to test a sample of urine known to be free from sugar at the same time as a counter test.

SUTURE OF THE SOFT PALATE WITHOUT SECTION OF THE MUSCLES.—Muscular tension has been considered the great difficulty in uniting the two portions of the *velum palati* in cases of cleft palate. To overcome this difficulty the muscles on either side have been divided by incision, or, as Billroth has proposed, they have been cut at the point of their insertion. Jules Wolff, at the Berlin Medical Society, stated that this mutilation was unnecessary. Since October last he has operated upon nine cases of congenital cleft palate, without resorting to this procedure, and his results have been most satisfactory. The operation is not only simplified, but by leaving the muscles of the *velum palati* intact, the function of this organ returns more promptly, and is more nearly perfect.—*Le Bulletin Médical.*

MENORRHAGIA.—J. F. Purviance, M.D., in *Medical Summary.*

℞ Fl. ex. ergot.....℥ ss.
Tr. catechu.....℥ iss.

Misce—S. Teaspoonful in sweetened water every 1 to 3 hours, as needful.

If undue irritability exist, causing urine pain and febrile action :

℞ Pulv. opii.....grs. v
Plumbi. acet.....grs. xx.

M. Ft. ch. No. x. One to be given every second to fourth hour with preceding.

After a long experience with catechu, I place more dependence upon it in these uterine flows than any other astringent.—*Archives of Gynæcology.*

TREATMENT OF HAY FEVER.—Dr. Rixa, of New York, has been fortunate enough to have a patient willing to be experimented upon for this complaint. The list of remedies used is a formidable one, and includes analgesin, internally and locally, boric-acid spray, cocaine spray, morphine, atropine, cauterization with pure carbolic acid, eucalyptus, solution of menthol in olive oil, and acetanilid. Many of these gave temporary relief, but no treatment was satisfactory until peroxide of hydrogen spray was used. Since then the writer has employed it in other patients and with the same success.—*Ralph W. Lelftwich, M.D., in London Medical Record.*

ANTISEPTIC APPLICATION FOR DIPHTHERIA.—The following antiseptic mixture is recommended as an application to diphtheritic patches:—

℞ Borate of sodium,
Chloride of Calcium, of each, 75 grs.
(4.25 grammes).
Carbolic acid, of each, 3½ grs.
(0.25 gramme)
Glycerin, of each, 2½ drachms
(10.0 grammes).
White honey, of each 3½ ounces
(45.0 grammes).—M.
Sig: To be applied by means of a soft brush.
—*Internationale Klinische Rundschau.*

SPECIAL BERLIN CLINICS FOLLOWING THE CONGRESS.—A correspondent informs us that many of the professors and *Docenten* of the university intend to hold special courses of from three to four weeks' duration immediately on the close of the Tenth International Congress. He adds that strangers will find the various announcements on the bulletin-boards of the Charité Hospital and the University Clinics.—*New York Medical Journal.*

SIR JAMES GRANT, of Ottawa, took a trip to the Pacific coast.

Personal.

DR. G. E. FENWICK, of McGill Medical College, Montreal, has resigned his position as Professor of Surgery, on account of ill-health. Dr. T. G. Roddick will take his place. Dr. Fenwick is one of Canada's most eminent surgeons, and the many friends of McGill will regret his resignation, and especially the cause thereof. No one doubts that Dr. Roddick will prove a worthy successor.

DR. E. H. HORSEY, a graduate of the Royal College of Physicians and Surgeons, Kingston, Ontario, in 1860, and for fifteen years resident physician at the Palmer House in Chicago, died suddenly on Tuesday evening. He had been suffering for some time, and on Monday submitted to an operation. He was left in charge of a man known as S. W. Nicholas, of Covington, Ky., who is said to have not only neglected his duty, but has mysteriously disappeared. When last seen he appeared intoxicated, but sent a despatch to his home saying he was insane. There seems to be a measure of mystery surrounding the case that no one has been able to satisfactorily solve.

The catalogue of the New York Polyclinic shows an attendance for the session of 1889-90 of 422. The following extract shows that the Faculty have resolved to exclude all but graduates of regular medical colleges from matriculating at this school: "Practitioners who are graduates of a regular medical college, or who, having attended one or more courses of lectures at such college, have a legal permit to practice, will be admitted."

A GOSSIPY Philadelphia paper says (which we quote for the encouragement of any blue young reader) that "many years ago, after he had worked in vain for two or three years to get enough medical practice to support him, Dr. D. Hayes Agnew dropped physic in disgust and went to 'keeping store' at Newton, Delaware county. There, in a small shop, he sold tarred rope, sickles, sunbonnets, molasses and rakes, nails and flour and fish-nets. But his passion for surgery and medicine made storekeeping galling; he gave it up, risked starvation in a desperate battle with fortune again, and won."—*Boston Medical and Surgical Journal.*

THE

Canadian Practitioner

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TORONTO, SEPTEMBER 1, 1890.

THE USE OF THE CURETTE IN CONNECTION WITH THE TREATMENT OF ABORTION.

At a recent meeting of the Philadelphia Obstetric Society, Dr. Joseph Hoffman reported the following very interesting case of perforation of the uterus with a curette. Patient suffering from a delayed miscarriage with certain putrid matters retained. Cervix dilated under ether with a Molesworth instrument. Interior of uterus curetted. After removing some debris the curette suddenly appeared to be too far, and it was found that it had passed through the uterine wall. The curetting was continued for a time, when something was noticed protruding from the os, which was supposed, and afterwards proved to be, omentum. This was pulled down with a tenaculum, to control hemorrhage and keep putrid matter out of the peritoneal cavity. Four hours afterwards the patient was again etherized and the abdomen opened. The abdominal cavity contained bloody fluid and clots. Incision enlarged to four inches to get proper view of uterus. A ragged rent was found on antero-lateral surface and sutured. The uterus was peculiarly soft. The abdominal cavity was washed out and drained for seven days. In five weeks patient was comfortable and able to go out for a ride or walk in fair weather.

There is something brilliant about such a case as this, when the ordinary accoucheur becomes transformed into a bold successful abdominal surgeon. The old-fashioned plan would have been somewhat as follows: Patient kept in bed; cervix dilated with finger if possible, or by the more dangerous tent; contents of uterus removed by the *clean* finger, using bimanual method; if such matters be offensive, cavity washed or swabbed out; patient kept in bed one to two weeks; medicine—a mixture containing ergot, quinine, and aromatic sulphuric acid, or something of the sort; patient able to ride or walk in fair or fine weather in considerably less than five weeks. This may seem tame and unattractive after a perusal of the more showy method. It wouldn't certainly be considered worth reporting to a learned society; but, we fancy, if the whole truth were known, it would prove sufficiently satisfactory to the patient and her friends. But some say—all your hum-drum cases don't turn out so well, some are very tedious. Yes! but the bad results generally arise from the fact that the *finger isn't clean.*

What we wish particularly to refer to in this connection is the use of the curette in such cases. The curette will frequently be found very serviceable, but its use is accompanied by grave dangers. So highly do we fear these perils that we believe the hard inflexible metallic instrument should never be used in obstetric practice. It is used by some men of undoubted ability, especially in the United States. In their skilled hands the dangers are minimized, but not absent. The uterine wall may not uncommonly be punctured by the curette or sound without much danger; but, all the same, we had better avoid such accidents. If we must use a curette in such cases, let it be a flexible one, and let it be used with the greatest possible care.

In the discussion which followed the reading of the report (*Buffalo Medical and Surgical Journal*), Drs. W. H. Parrish and J. Price took the proper and safe stand in condemning the routine use of the curette in such cases. Dr. Hoffman in reply urged, first, the use of the placental forceps, and, second, that of the curette to remove what the forceps had left, and concluded by saying—"of all methods, I think that of gouging away the early placenta with the finger nail the most bungling and unskilful." With all due deference to Dr. Hoffman, we may state our opinion, that if any one thing has been conclusively proved in the history of

obstetrics, it is the fact that, for the removal of the contents of the uterus in delayed abortions, no instrument that has ever yet been devised is nearly so safe or effective as the clean, educated, and intelligent finger tip.

TENTH INTERNATIONAL MEDICAL CONGRESS.

The great medical gathering which has been held in Berlin during the present month has been attended with remarkable success. The international character of the meeting was its most interesting feature, and the opportunity of seeing gathered together many of the greatest men in medical science of the civilized globe was in itself a grand experience for all who had the good fortune to be there.

The communications made before the Congress will be read with great interest, from the eloquent address of welcome by the illustrious president, Professor Virchow, down through the long list of valuable contributions made by such men as Koch, Lister, Bouchard, Cantani, and Meynert. We quote the following from a British journal, regarding the manner in which the guests were entertained in the metropolis of the German empire: "Nothing could have exceeded the overflowing hospitality, the generous and cordial welcome, the thoughtful courtesy, and the minutely elaborate preparations with which the social and scientific needs of the invading hosts were met. All were alike made to feel this welcome; so that whether for its remarkable assemblage of the most eminent representatives of cosmopolitan medical science, or for its endless round of scientific and social activity, the Berlin Congress must be pronounced to have far exceeded any which has preceded it, and it will certainly be difficult in the future for any capital to surpass the feat that Berlin has accomplished."

A number of Toronto men attended both the Berlin Congress and the meeting at Birmingham of the British Medical Association. Drs. Graham, Cameron, Reeve, Peters, O'Reily, Nevitt, MacFarlane, Covernton, Allan Baines, and Prof. R. Ramsay Wright, were among the number. The next meeting of the Congress will take place in 1893, at Rome.

THE BRITISH MEDICAL ASSOCIATION.

The fifty-eighth annual meeting of the British Medical Association has recently been held at Birmingham. A series of interesting papers were read, which will afford matter for study and criticism for a long time to come. The views expressed by the president, Dr. Wade, in his address on the practechnical stages of medical education, and the remarks made by Mr. Lawson Tait on the subject of surgical training, have already aroused considerable criticism. Dr. Wade's opinion is that we should raise the standard of preliminary examination sufficiently to insure that the student's knowledge is such as cannot have been obtained by cramming.

Professor Osler, in proposing the toast of the British Medical Association at the annual dinner, referred to the suggestion of the president, that Latin should not constitute part of the education of the doctor. This, Dr. Osler thought, came particularly hard upon those teachers who came from America, for they were struggling hard to get a proper system of elementary education, and they wanted above all things some classical training for their medical students. One of the striking features of this meeting of the British Medical Association was the development of the pathological section, which is only of recent institution. The proceedings in this section took the form of practical demonstration instead of the tedious reading of papers; a series of demonstrations on the screen, by Woodhead, Watson Cheyne, Bruce, and others, were greatly appreciated. In the section of anatomy and physiology valuable contributions were made by such men as Gaskell, of Cambridge; Cunningham, of Dublin; and Symington, of Edinburgh. In all the sections excellent work was done.

The meeting was one of the most successful of the Association, and was largely attended by members, not only from different parts of Great Britain, but from the colonies.

THE CANADIAN MEDICAL ASSOCIATION.

The annual meeting will be held in Toronto, on the 9th, 10th, and 11th of September, in the hall of the Normal School, St. James' Square. Every effort will be made to make the session a

success, and already a somewhat extensive programme has been arranged. The list of papers (published elsewhere in this journal) will doubtless be considerably extended before the date of meeting.

A dinner will be given by members of the profession of Toronto to the visitors, at the Queen's Hotel, on the 11th September, at 7:30 p.m. The owners of the yachts "Oriole," "Aileen," and "Abeona," have placed their craft on Toronto bay at the disposal of the committee of arrangements for the afternoon of the 10th, and the managers of the Industrial Exhibition have arranged for the special entertainment of the members of the Association during one of the days of the meeting. The president for the year is Dr. James Ross, of Toronto; and the secretary, Dr. James Bell, of Montreal.

Hospital Reports.

REMOVAL OF OVARIAN CYST—HÆMATOCELE OF BROAD LIGAMENT—LOOSENING OF LIGATURE—SECONDARY HEMORRHAGE — REOPENED IN TWELVE HOURS —NERVOUS SYMPTOMS —RECOVERY.

UNDER THE CARE OF DR. J. W. ROSS, IN THE TORONTO GENERAL HOSPITAL.

Mrs. R., æt. 28. Referred by my friend Dr. Verner, of Toronto. Married 10 years. Has had three children; youngest one 8 years of age. Three miscarriages. The last time pregnant, five or six years ago, had a miscarriage; menses came on last time two weeks ago and lasted three or four days as usual; has not missed a month; noticed enlargement of abdomen two years ago; has been in poor health for five years; no family history of tumors of any kind; suffers from frequent and painful micturition; on examination a tumor is to be felt rising from right ovarian region about the size of a child's head; uterus found in front of tumor between it and the bladder and inclining toward the left side; fluctuation present; tumor diagnosed as ovarian cyst; operation June 6th, 1890; chloroform; removed a multilocular cyst of the right ovary; pedicle very broad; tied with the Staffordshire knot after transfixion; tied as tightly as hands could tie it; tissues of pedicle very dense; omentum adherent to right broad ligament; ligatured and cut off; no drainage-tube used.

1.30 P.M. Temperature, 97°; pulse, 82; face pale; feels cold

3 P.M. Pad changed; a little oozing from wound had discolored the pad.

5.15 P.M. Pulse 100; pain in abdomen.

5.30 P.M. Pulse 110; patient almost crying with pain.

7 P.M. Retched once.

7.15 P.M. Patient retched again.

8.15 P.M. Patient retched again and blood gushed from the wound and stained the pad. I was at once informed.

9 P.M. Reopened abdomen; found it filled with clots, and after clearing them out as quickly as possible, found a small vessel spouting in the pedicle and a general oozing from the stump; a small perforation was found in the broad ligament below the ligature, as if an hæmatocele had formed in the layers of the broad ligament and had burst into the abdomen; tied the pedicle with four chain ligatures below the old ligatures and found the hemorrhage effectually controlled; washed out the abdomen; drained.

12 P.M. Pulse 138; tube emptied of clots, and a little fresh blood probably from the broad ligament and parts to which omentum had been adherent; patient retched frequently; pulse dropped to 114; temperature 100°.

June 7, 3.30 A.M. Discharge of blood from tube continues; ℥ ii. every half hour.

9 A.M. Serum only from tube.

6.45 P.M. Temperature 99°; pulse 100; retching very severe.

June 8, 2.15 A.M. Retching continues; breath offensive; red discharge from vagina.

June 8. Champagne and brandy enemata; vomiting continues; temperature normal; pulse 118.

June 9. Vomited matter like coffee grounds; after taking seidlitz powder sweetened with cane sugar (not by my order) vomited matter looked bright red like blood, but no clots or streaks were to be seen. I attributed this color to chemical action of the bile and cane sugar in presence of small quantity of some acid.

12 P.M. Pulse 116; temperature 100°; patient wandering for a little while; nervous symp-

toms set in; looks flushed; severe headache; potass. bromide and chloral by enema.

June 11. Restless and noisy; delirious; talking during sleep; looks wild; vomiting continues; no iodoform or carbolic acid has been used.

June 12. Tea and bread retained; buttermilk returned; slight diarrhœa; expression better.

From this on patient convalesced very nicely, and went home on the 20th July quite well.

Remarks.—In this case, and one reported in the last issue of THE PRACTITIONER, hemorrhage occurred subsequent to operation. In one case it was free for one hour but ceased, and the abdomen was not opened. In the other it was giving rise to great pain, and telling rapidly on the pulse, and the abdomen was reopened; no doubt large quantities of blood can be absorbed in the peritoneum. The nice point is when to reopen and when to leave the patient alone. In the second case the patient remarked several times that she could taste blood in her mouth when there was no evidence of blood in the vomited matters. I at first associated the tightness with which it was necessary to tie the broad ligament in No. 2 with the severe and long continued retching, but afterwards found out that the patient had become a slave to the morphine habit for several months before coming under my notice.

PLEURISY, WITH EFFUSION.

A CASE IN TORONTO GENERAL HOSPITAL, UNDER THE CARE OF A. M'PHEDRAN, M.B.

The following case is of interest chiefly on account of the very large amount of effusion present. The fluid filled not only the right chest but extended over into the left over an inch beyond the sternum. Of course the danger is great in such cases, and death may occur suddenly, so that aspiration should be done quickly. The final aspiration was not sufficiently large, the house physician being fearful of drawing off too large an amount at once. He was directed to repeat the operation on second day after, and tried several times, but could obtain no fluid, as the instrument did not work properly. The amount of fluid drawn off on the seventh was very large, might, in fact, be considered too large, but the effect of the aspiration was closely watched, and as he showed no signs of disturbance, the fluid was allowed to run slowly. The chief danger that the future has for him now is probably from phthisis, which so often follows serious pleurisy.

The following notes were taken by my clinical clerk, Mr. W. A. Barnhart:—

H. A., æt. 24; farm laborer; has previously enjoyed good health; family history good. On Saturday, June 14th, 1890, he caught a cold while washing sheep; he felt several chills, which, in a few days were followed by severe pain in right side of chest, not referred to any particular region; his respiration became hurried and troublesome; he still continued his work, but felt very unequal to it. On Wednesday, 25th June, was obliged to remain in bed; his sister applied poultices and mustard to the affected side, which relieved him some. On Friday following he went to a physician, who told him he had fluid in his side; he applied a fly blister to it and told him to go to the hospital as his room was too small and poorly ventilated.

Came to hospital on Sunday, June 29th; temperature 102.5°; pulse 105; respiration 65 per minute: his appetite was fair, his tongue very little coated, and his bowels regular.

June 30. Physical examination: the right side was full and rounded; the location and direction of ribs was not visible; a total absence of respiratory movement; vocal fremitus absent; dulness on percussion amounting to flatness in front and behind, extending from apex to base of lung and about an inch to left of sternum except over tracheæ and right bronchus; there was also a very marked feeling of resistance to the pheximeter finger; there was complete absence of breath and voice sounds in the region of flatness: there was increased movement, hyperresonance and puerile breathing in left side; the cardiac impulse was displaced outward one inch and upward about an inch; the chest was aspirated, thirty ℥ of fluid being drawn off, after which his dyspnœa was somewhat relieved.

July 1st. Slight expansive movement in right side; flatness on percussion to almost the same extent as previous day.

July 2nd. Temperature rose to 103°; pulse 105; respiration 60 per minute.

July 4th. Temperature 103°; pulse 110; respiration 55 per minute; no change in dulness; patient prefers to lie on affected side.

July 7th. His condition has remained much the same for last few days. Aspirated and withdrew eighty ℥ of fluid.

July 21st. Patient has improved every day since last operation; his appetite is better and he sleeps well; respirations are now reduced to 28; pulse 80 per minute; temperature 100°; the fluid still remaining is being slowly absorbed.

Aug. 15. Discharged; his general health good; still quite decided dulness with weak respiratory murmur over lower part of chest.

Clinical Notes.

REPORT OF A CASE OF ADDISON'S DISEASE, WITH NOTES OF AUTOPSY.

BY JOHN CAVEN, M.D., L.R.C.P. LOND.

A. F., fisherman; residing at Peak's Island, Maine. Family history, good; nothing noteworthy.

Personal history previous to illness.—The only facts worthy of notice in the history of the patient prior to his present illness are: (1) That he served as a cavalryman in the late American war; was wounded in the back and arm, and lay bleeding on the field for over three hours; was then taken prisoner, and left without food or treatment for a considerable length of time (the only treatment he ever received was washing of the wounded arm with cold water). (2) That his life since the war has been an exceedingly hard one, he being exposed to a great degree of wet and cold, and that often without proper food; and that he suffers from piles.

History of present illness.—The patient, who is 45 years old, had noticed for the last three or four (his wife says five) months that his strength was leaving him, though very gradually. He also noticed that his hands and face were becoming very dark in color, although less exposed to sun than usual. The weakness he attributed to bleeding piles, and the coloration of hands and face to sun-burning, He persisted in attempting to work, and on several occasions became very faint as a result. Three weeks before death, the patient was seized one night with purging and severe pain in the bowels. This continued all night. He was seen next day by a doctor, and enteritis suspected. Diarrhœa and pain yielded to treatment, but he was unable to retain anything on his stomach. From this on to the time of his death, which took place on August 12th, he gradually sank, there being no signs of any acute disorder. At all times, his pulse was exceedingly small and feeble, and during the last five days of his life was inappreciable, except in the larger vessels. During the last five days of his life, he complained of vague pains in the abdomen, not being able exactly to locate them, and was unable to lie on his left side. The morning of his death he became delirious, and for the last few hours convulsive twitchings, especially of the left side, were present (The clinical notes are necessarily imperfect, since the case was not in the hands of the reporter).

The autopsy, which was made for Dr. Thayer, of Portland, by the reporter, showed that the case was one of Addison's disease. Only the abdomen was opened. The following conditions were found: The peritoneal coat of the small intestine was considerably injected; the mesenteric glands were enlarged, indurated, and blotted over with black pigment; spleen about five times its normal size, color and consistency normal; liver showed extensive adhesive perihepatitis, otherwise healthy; kidneys showed a few subcapsular cysts, but no signs of *general* interstitial inflammation; supra-renal capsules greatly enlarged in all diameters; section showed their central areas to be composed of large bean-shaped nodules of caseous material; no special affection of sympathetic ganglia or nerves could be made out with the naked eye; stomach and intestines healthy; bladder healthy; pancreas slightly smaller than usual, but healthy.

There are one or two points in connection with this case which seem to be worthy of special notice, namely:

(1) The limited area of the so-called bronzing, which was confined to the face, neck, hands, and wrists. There was absolutely none on the buccal mucous membrane, or on any other part of the skin, except that mentioned. Some small pigmented spots were found on one arm, but these the patient said were moles, and had always been present.

(2) The conjunctivæ were yellowish, as in jaundice; not pearly white, as usually found in such cases.

(3) The pigmentation of the lymph glands of the mesentery appears to be an unusual feature. This pigmentation showed on the outside of the glands and on section.

FOREIGN BODY IN ALIMENTARY CANAL TEN MONTHS.

BY W. D. T. FERGUSON, M.D., ROCKLAND, ONT.

On the evening of Oct. 4th, 1888, I was called to see Arthur Fairfield, æt. 7, who had a few moments previously swallowed a cent. Found the little fellow making violent but futile efforts to vomit. He was becoming rapidly asphyxiated, and I was afraid lest the foreign body had entered the respiratory tract, but on investigation found the asphyxia due to the convulsive efforts at vomiting. Felt sure the coin was lodged in some portion of the gullet, and that it had not yet reached the stomach. Failing to locate it by digital examination, both internally and externally, I introduced a soft bougie; my intention being to first locate it, and then contrive some means of extracting it, as I had not a coin extractor with me. After passing bougie some seven or eight inches it became arrested, but hardly had its tip touched foreign body when a convulsive effort was made to swallow, and bougie passed on. The patient immediately experienced a sense of relief, and told me that the cent was gone. Satisfied of its arrival in the stomach I felt easier regarding patient's immediate safety, and as he was soon taken with another violent fit of vomiting, looked eagerly for the return of the cent, but in vain.

Shortly before, patient had eaten a large meal of bread, potatoes, etc., this was all thrown up in an undigested state. As this vomiting soon gave place to retching, the little fellow became much exhausted, and despairing of having the cent brought up, I administered an anti-emetic with very little hope, I must confess, of its accomplishing much, aware of the constant presence of the cause. All that night and next day patient could retain nothing on his stomach, and complained of pain and oppression in this region, also dribbled copiously of a watery fluid from mouth. Towards next evening the stomach having, no doubt, become accustomed to its new tenant, or tired out by its useless efforts at eviction, become passive, and he fell asleep. The following morning, in consultation with Dr. Robillard, of Thurso, Quebec, we concluded to keep patient in bed, and feed him on a constipating diet for a few days. Thick soups, eggs, etc., were freely given, and at the end of two days a purgative dose of castor oil. Oil operated nicely, but without desired effect. Then I resorted to constipating diet alone, the idea being by this means to dilate any constricted portions of canal, and thus allow passage of the cent.

At the end of two weeks, as patient was feeling tolerably well, with only slight oppression and slight soreness in stomach, and cautioning himself and parents to watch the motions carefully, I allowed him to join his playmates, and from that time on he was quite hearty. As a preventive a gainst the stomach acids dissolving the metal and causing copper poisoning, I put him on an alkaline mixture. Saw patient occasionally for several months, and for at least four months felt quite positive that the cent was still in the stomach—pylorus end. At the end of that time patient could give no information, nor could I on careful examination elicit any signs of its presence, so concluded that he must have passed it unnoticed.

On the 6th of June, 1889, was called to see patient suffering from severe intestinal colic in region of ilio-cæcal valve. Immediately thought of foreign body, gave enema, hot application, and opiates, with prompt relief of colic. Again concluded that coin could not be present.

Heard nothing further till the morning of 10th August, when I was informed by the little fellow that he had found the cent. On enquiring from his mother, found that the previous evening as he was about retiring he was seized with very severe pains in lower part of abdomen. His mother endeavored by means of hot applications to allay the pain, but failing to do so was about sending for me when his bowels moved, and examining the motion the coin was found imbedded in a mass of hard fæces tinged with blood. Relief from pain was instantaneous. Patient's bowels had not moved during the three or four previous days.

It is now twenty-two months since the little fellow swallowed the coin, and one year since exit per rectum. Coin was an old fashioned one, larger than the modern cent; diameter, 1⅛in. It was only slightly corroded. Patient is to-day quite healthy.

The above is the unvarnished history of the case, and I report it not as an example of judicious medical treatment, but because I have not yet heard of a foreign body remaining so long in the digestive tract with so little apparent harm.

Correspondence.

LODGE PRACTICE.

Editor of CANADIAN PRACTITIONER:

SIR,—I think your editorial on this subject in your issue of the 16th inst., will meet with the cordial approval of the majority of your professional brethren in all parts of the province, and particularly in the towns and cities. Perhaps in the densely populated centres of European countries some show of reason can be given for medical men accepting such practice. But in a young country, as Canada is, no man need want, except he be improvident or intemperate. It may be assumed that no medical man has the right to agree to attend the men who are members of many of these societies at a nominal sum. Why, sir, I know men, members of these societies, who are in very comfortable circumstances, and who are not ashamed to receive medical attendance from their "lodge-doctor" for the miserable dollar a year they pay for membership fee. Is it not a great wrong that medical men should treat as paupers those who can well afford to pay, and who, for that matter, live in a much better way than some of our struggling fellow-practitioners?

It is a fact that some of these societies offer as an inducement to persons to become members, that they will receive free medical attendance. Can a lawyer be found who would give his service to clubs and lodges in such a way? What grocer, for the honor of being appointed grocer to the "Grand Knights of the Maccabees," would permit each of the said Knights for the nominal sum of a dollar a year to obtain from his store all the goods he personally needed? If it be right, why do not these societies try to get everything else free, as well as medical attendance?

I do not wish to be understood as desiring to limit the charitable work of any member of our profession. Everywhere will be found the widow and the orphan, often left all but destitute after the lingering illness and death of the husband and father. To them let every brother render his charitable service without stint. But in attending the well-to-do members of these societies as paupers, in giving his name, his time, and his service in enlarging the membership of these so-called benefit societies, he degrades his calling, does wrong to his professional brother, and inflicts a real injury on the public at large.

Yours truly,

ANGUS MACKINNON.

Guelph, Aug. 23rd, 1890.

Pamphlets Received.

Identité de la Dengue et dé la Grippe-Influenza. Par le Dr. Jules Rouvier, Paris, Librairie Médicale, 23 Rue Racine.

Transactions of the American Pediatric Society, vol. 1, 1889. J. B. Lippincott & Co.

Twelfth Annual Report of the State Board of Health of the State of Rhode Island, 1889.

Rivista Clinica, Archivio Italiano di Clinica Medica. Francesco Vallardi, Milano.

Fact and Theory Papers. The Suppression of Consumption. G. W. Hambleton, M.D.

Miscellaneous.

THE CANADIAN MEDICAL ASSOCIATION.

The programme of the next annual meeting of the Association, which will be held in Toronto on the 9th, 10th and 11th of September, will include the following addresses and papers:—

Address in Medicine, by Dr. Prevost, Ottawa.
" " Surgery, by Dr. Chown, Winnipeg.
" " Obstetrics, by Dr. J. Chalmers Cameron, Montreal.
" " Materia Medica and Therapeutics, by Dr. W. S. Muir, Truro, N.S.

Papers:

The Failure of the Removal of the Ovaries and Tubes to Relieve Symptoms—Dr. Jas. F. W. Ross, Toronto.

Abscess of the Brain—Dr. G. Sterling Ryerson.

Pernicious Anæmia (with report of two cases) —Dr. A. McPhedran, Toronto.

The Cardiac Complications of Gonorrhœal Rheumatism — Dr. R. L. MacDonnell, Montreal.

Pharmacology of Salicylamide—Dr. W. Beatty Nesbitt, Toronto.

Syphilis of the Spinal Cord—Dr. F. G. Finley, Montreal.

Cholecystotomy—Dr. F. J. Shepherd, Montreal.

Inhalation in the Treatment of Chronic Pulmonary Diseases—Dr. Price Brown, Toronto.

(*a*)The Local Administration of Bichloride of Mercury as an Alterative in Pelvic Exudations in Women ; and

(*b*)Why Apostoli's Method Sometimes Fails—Dr. A. L. Smith, Montreal.

Chronic Urethral Discharges: their Diagnosis and Treatment. With a Demonstration of the Electric Endoscope—Dr. Edmund E. King, Toronto.

(*a*)Electricity in Gynæcology. Report of Cases;

(*b*)Porro's Operation. Report of Case—Dr. Holford Walker, Toronto.

A Contribution to the Operative Treatment of Injuries to the Spinal Cord in the Cervical Region—Dr. Jas. Bell, Montreal.

Exhibition of Cases—Dr. B. E. McKenzie, Toronto.

Hydatid Growths—Dr. E. B. O'Reily, Toronto.

The Surgical Treatment of Fractured Spine—Dr. E. A. Praeger, British Columbia.

(*a*) Hemi-Atrophy of the Tongue.

(*b*) A New Method of Preserving Specimens of the Eye—Dr. H. S. Birkett, Montreal.

Abscess of the Anterior Mediastinum—Dr. John Campbell, Seaforth.

N.B.—Members will please note that certificates entitling them to reduced travelling rates will not be issued this year, as heretofore, by the Secretary, but will be obtained from the agent at the starting point of the journey.

JAS. BELL, M.D., *Secretary.*

COLLEGE OF

Physicians and Surgeons

OF ONTARIO.

Medical Council Fall Examinations

SEPTEMBER, 1890,

IN TORONTO AND KINGSTON.

The written Primary and Final Examinations commence on Tuesday, the 23rd September, 1890.

By Order

R. A. PYNE, Registrar,

College Physicians and Surgeons of Ontario, Toronto.

N.B.—Candidates' application forms may be had on application to the Registrar. The application is to be properly filled out and declaration executed, and delivered into the hands of the Registrar, accompanied by the tickets and certificates, and the Treasurer's receipt not later than the 17th of September, 1890. All candidates for Final Examination are required to present their primary tickets and certificates at the same time. Candidates for Primary who have attended a prior examination will require to pay a fee of $10. Candidates for Final who have attended a prior examination will require to pay a fee of $10.

The Treasurer's address is Dr. W. T. Aikins, 282 Jarvis St., Toronto.

1890.

Medical Council Election

FOR THE MALAHIDE AND TECUMSEH DIVISION.

Extracts from By-law for conducting the elections of the Medical Council of Ontario.

Election to take place on the 21st of October, 1890.

"That any member of the College of Physicians and Surgeons of Ontario presenting himself for election as a representative to the Medical Council for the Territorial Division of Malahide and Tecumseh, must receive the nomination of at least twenty registered Practitioners resident in such division, and that such nomination paper must be in the hands of the Returning Officer for the Division not later than two o'clock on the afternoon of Tuesday, the 30th September, 1890.

"In the event of only one candidate receiving such nomination, it shall then be the duty of the Returning Officer to declare such candidate duly elected.

"That the Registrar shall send to every registered member of the College entitled to receive the same, a voting paper (in accordance with residence given on register) by Tuesday, the 7th of October.

"Any member of this College not having received a voting paper by Tuesday, the 7th of October, 1890, when more than one candidate has been properly nominated for the Division of Malahide and Tecumseth, will send by post to the Registrar his name and address, and a voting paper will be forwarded at once for the Division."

Certified a true copy of extracts from By-law passed by the Medical Council of Ontario.

By Order,

R. A. PYNE, Registrar,

College of Physicians and Surgeons of Ontario, S. E. Cor. Bay and Richmond Sts., Toronto, Ont.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management. The J. E. Bryant Company Limited 64 Bay Street

TORONTO, SEPTEMBER 16, 1890.

Original Communications.

TRAUMATIC TETANUS AND ITS TREATMENT.

BY THOS. R. DUPUIS, M.D., M.R.C.S. ENG.,

Prof. of Clinical Surgery, R.C.P.S., Kingston.

Tetanus is, without doubt, one of the most fatal diseases known, and one which is very properly a dread to the surgeon; but, although it is so very fatal, we have fortunately an offset in the fact that it is not very common, hundreds of surgical cases progressing to a cure without so much as even a symptom of tetanus showing itself. In a practice of over thirty years, the last fifteen of which have been in a great measure devoted to surgery, I have not come in contact with more than five cases of this terrible disease. It is not, therefore, that I can speak from an extended experience, or that I can advance an accumulation of new facts respecting tetanus, that I have attempted this paper; but it is because, having tried many remedies in the cases which have come under my care, and watched the effects of the means used very closely, that I feel that I am in a position to say which I have found most useful, and which I would use again and recommend to others in the present state of our knowledge regarding this disease, and its treatment.

We shall therefore proceed *secundum artem*, with the consideration of tetanus, and leave any empirical methods of treatment to be noticed at the close of this paper.

Tetanus is briefly defined to be a disease in which there are tonic contractions of the voluntary muscles, irregular in time and varied in intensity, subject to exacerbation and remissions, and in the early stages to complete intermissions. Very often, early in the disease, the jaws become fixed by contraction of their muscles, and the condition of trismus is present; or the contractions seize upon the back muscles, producing opisthotonos; or the anterior muscles of the neck and trunk become affected, and emprosthotonos results; or finally the muscles of either side may contract, causing pleurosthotonos. The frequency of these different conditions arises in the order in which they are named.

There is always present more or less contraction of muscles during the course of tetanus; but there are paroxysms, in which the spasms increase, the pains become more severe, the thoracic and abdominal viscera more interfered with, and the body curvature greater, which are marked characteristics of this disease.

Systematic writers have divided tetanus into two kinds, viz., spontaneous or idiopathic, and traumatic. The first kind is said to be more common in tropical climates and amongst the dark races than among whites, and in temperate climates. Its cause is obscure. Constipation, with loaded bowels, exposure to wet and cold when the body is heated, exhaustion from long fatigue or watching, and several other causes, are given to account for it, such as unhealthy surroundings, and latterly, bacteria, etc. There is a possibility that the food and water in hot

climates, filled with living germs, may cause irritation within the system, or other agents of microscopic minuteness, entering the body through other avenues, may become sufficient to produce tetanus. If this be so it may be found that, philosophically considered, so-called spontaneous tetanus is as truly traumatic as that which proceeds from an apparent and well-marked wound The causes of tetanus, according to the orthodox view, are divided into intrinsic and extrinsic; the former comprising such forces as operate from within, and is made to include the action of poisons, like strychnia, brucia, thebaia, cicuta, maculata, etc., as well as unhealthy conditions of system which may generate the *materies morbi* within it.

Extrinsic causes include all wounds and external injuries apparent to the senses. And it is remarkable how slight an injury will at times be followed by tetanus; the prick of a needle, the sting of a bee, the peck of a bird, too close paring of the nails, piercing the ears, extracting a tooth, the scratch of a cat, or bite of a mouse, venesection, small cuts, especially in tendinous parts, bruises, dislocations of small joints, etc. It does occur, also, after large and well-conducted operations, when some nerve trunk becomes irritated by implication of its branches in such a manner as to injure them. Dependent as tetanus is on an exaltation of the reflex functions of the spinal cord, any irritation conveyed to this by an injured nerve may set up such a morbid action in it that the efferent nerves may convey its influence to, and induce the spasmodic contractions of tetanus in, the muscles which they supply. Nicolaier-Rosenbach, Tizzoni, and Cattani, claim that they have discovered a tetanus bacillus which, after having been obtained by pure culture of the spores, in proper media, produced tetanus in mice inoculated with it; and they hold that this bacillus is the real cause of tetanus.

Of the pathology of tetanus, Mr. Timothy Holmes, of London, Eng., says that "nothing really is known." Others state that "changes are found in various parts of the cord; but chiefly in the medulla oblongata, the lumbar region, the gray substance, around the central canal and in the anterior horns. Very considerable dilatation of the vessels is always found. Exudation of a semi-fluid colloid substance, hyperplasia of the neuroglia, and abundant nuclear proliferation in the gray matter, have been observed in recent microscopical investigations." J. McCarthy, in Heath's Dictionary of Practical Surgery, allows that certain poisons, generated in the system by unhealthy surroundings, may play a part in the causation of tetanus; acting by producing lesions of the brain and spinal cord.

The great question, however, to be solved is, how many of the changes, observed in those who die from tetanus are *ante-mortem*, and how many *post-mortem*, and if any of them observed are sufficiently constant to warrant us in saying, "This is the undoubted pathology of tetanus." All the literature which I have consulted on the subject leaves us quite in the dark on this point. The recent notion advanced, that tetanus depends on bacterial lesions is, to say the least of it, to my mind, "not proven." And why, we may ask, need either environment or schizomycetes be called in to answer for the causation of tetanus? Have we not the injured nerves to account for it? And do we not have it occurring where neither of the foregoing factors could be suspected of playing a part? In the ward where my patient suffered tetanus, last winter, as many as seventy-five surgical operations are performed every winter, and his was the first case which, to my knowledge, for fifteen years, occurred in that ward! The operation upon him was performed in the same amphitheatre, and with the same antiseptic precautions which are in constant use for all my surgical cases, so that his surroundings could have had nothing to do with the development of the tetanus. Moreover, after the disease showed itself, he was not isolated, only placed in the quietest corner of the ward, and surrounded by a screen; and not one of the various surgical cases that were treated in the same ward during his illness showed the least sign of anything like tetanus. I am, therefore, not prepared to accept infection or micro-organisms as the chief factors in the etiology of tetanus. When reflex nerve irritation has been set up by any injury there is no doubt that unhygienic surroundings, or the multiplication of bacteria in a lowered vital condition of system, may have much to do with increasing and perpetuating the disease. This, it seems to me, is as far as I can go, in admitting the influ-

ence of those agents in the etiology of tetanus. I will now outline the symptoms as generally observed and laid down in books, adding others which I noted in the case under consideration, before proceeding to a detailed description of the case itself with its peculiarities, treatment, course, and termination.

When tetanus, due to a wound, is about to occur, the wound becomes irritable, cicatrization ceases, the suppuration changes its character, pains shoot towards the body, a feeling of stiffness in the neck, and difficulty in opening and closing the jaws, comes on—the jaws quite soon becoming tightly closed; the muscles of the pharynx suffer, and swallowing becomes difficult and painful, from spasms; the muscles of the face often assume a fixed position, the mouth being sometimes closed, and the lips protruding; but more frequently, as in my patient, the lips are drawn asunder, the forehead transversely wrinkled, the eyebrows elevated, and the angles of the mouth so raised by the contraction of the levatores and zygomatici, as to produce that peculiarly frightful expression, termed the *risus sardonicus* or canine laugh. In a short time the muscular rigidity extends to the trunk and extremities, and the whole body becomes at times as stiff and inelastic as if frozen. The flexors of the upper extremities, and the extensors of the lower, suffer the most, and hence we find closure of the fingers, and "pointing of the toes." But this is what we might expect, since the flexors of the hand and the extensors of the foot are homotypic muscles.

In the beginning of an attack of tetanus the rigidity is not, as a rule, general or constant; separate groups of muscles being separately affected, and remissions, or even complete intermissions, irregularly occurring. Soon, however, the intermissions cease, the paroxysms become more severe, and almost continuous, and extend to all the voluntary muscles; the body is then bent backwards, forwards, or sideways; the face is horribly distorted, the breathing is rendered difficult and painful, the heart's action is seriously interfered with; groans and even loud yells, and urine, and fæces, are forced from the patient by the spasms, and detonating expulsions of flatus per rectum. The feet are incurved and extended, the hands firmly clenched and drawn up, with the fore-arm towards the body, and the whole condition of the sufferer one of the most excruciating torture. At this period of the disease the slightest cause—a breath of air, a touch, a word, a noise, two or three gathering around the patient's bed, almost only a look, is sufficient to excite a paroxysm, with all its attendant horrors. And it is just at this point that death is liable to occur from heart contraction (arrest in systole), or from spasms of the muscles of respiration. The temperature is not generally much raised until just preceding the close; the body is bathed in profuse perspiration; the pulse is, as a rule, quick and feeble; the bowels are constipated and the urine scanty. Sleeplessness is an annoying symptom. When sleep is procured by narcotics the spasms cease, when not too violent, but recur when the patient awakens; but when the spasms are severe they never really relax, and the patient is apt to awaken into a paroxysm. The tongue is frequently protruded from the mouth, by spasm, and caught and terribly lacerated by the teeth snapping suddenly together.

The prognosis of tetanus is always unfavorable, death occurring early in the disease. Hippocrates noticed that, when the patient survives beyond the fourth day, he stands a better chance of recovery. No doubt this is true, but death has occurred as far along as thirty-nine days after the commencement of the attack. It is generally believed that if life can be prolonged beyond three weeks, recovery is quite probable; but the periods of death, in 327 cases, analyzed by Mr. Roland, give us the most reliable data in this matter: 79 died within 2 days, 104 in from 2 to 5 days, 90 in from 5 to 10 days, 43 in from 10 to 22 days, and 11 beyond the 22nd day; giving an average period for death of between six and seven days. So unfavorable is the prognosis in every case, that we should keep death constantly before our own mind, and the minds of the patient's friends, while doing everything in our power to relieve and save.

The diagnosis of tetanus is not difficult, and need not claim our time and attention in this paper; the treatment is of the most importance to us, and it is in this that we shall find the greatest scope for ingenuity and good judgment. Amputation of the affected part, excision of a portion of the injured nerve, and stretching of

the nerve, have each been tried with variable degrees of success. Amputation offers the most rational chance for recovery; but it needs to be done early and in such a place and manner as to ensure ablation of all the diseased portion of the irritated nerve or nerves. Excision, or stretching, of the nerve, requires to be done before the central nervous organ becomes too much disorganized for rapid and complete recovery. Mr. Timothy Holmes makes a sweeping statement regarding the treatment of tetanus, saying that, "irrespective of these surgical measures, the treatment of tetanus is entirely empirical and completely unsuccessful." Nearly every drug in the pharmacopœia has been tried; some of them, at times, with an appearance of success, but at other times with decided failure. Cases that have recovered have done so under very different remedies, and giving one the impression that the strength of nature had struggled for the mastery, and had been successful, regardless of any medicines which may have been administered. Chloroform, chloral hydrate, bromide of potassium, cannabis indica, curara, nicotine, lobelia, eserine, aconite, warm baths, cold baths, ice to the spine, and many other remedies, have all been tried, without any one of them having shown itself a specific, or even a reliable remedy, in this disease.

The typical case with recovery, which I purpose to bring before this meeting, was that of (J.B.) a man æt. 20 years, a native of Kingston, and a laborer by occupation. He is stout-looking, 5 ft. 8 in., high, and weighs 185 lbs.; but he is of that type, called of old, the phlegmatic temperament, and his muscles are flabby, his animal spirits sluggish, and his strength not as great as his appearance would indicate. His father is alive, and a confirmed asthmatic; his mother died from heart disease some years ago. On the 10th of January last, while stealing a ride from Toronto to Kingston, on a freight train, the toes on both his feet were frozen, the left one being more severely damaged than the right one. On the 11th he was admitted into the Kingston Hospital, complaining of great pain from the frostbites, and suffering weakness and nervous shock. He was given a warm bath, put to bed, a carbolated linseed meal poultice applied to the frozen parts, and hot animal broths, hot thin gruel, tea and milk, administered internally with full doses of morphine, given hypodermically, often enough to relieve pain. Supporting treatment with rest in bed and poulticing, were continued, and, notwithstanding this, eleven days elapsed before the line of demarcation was apparent on the left foot; and during all this time he was constantly complaining of severe pain in the left foot (the worst frozen one), and occasionally becoming so frantic from pain that he could scarce obtain ease in any manner. The sloughs on the toes of the right foot were not of sufficient extent to need amputation; the left one only requiring this. On the 22nd of January, I operated, removing the left great toe at the metacarpo-phalangeal joint. The operation was done under perfect antisepsis, and nothing was apparent to indicate anything but speedy recovery, such as has always taken place in amputations of extremities in similar cases in our wards. But the sequence was not of the usually favorable character; the pain continued to increase at the seat of the wound, to shoot up the front of the foot and instep, and into the leg, and thence upwards to the body. At the expiration of two days immense doses of morphine were required to procure ease, and he began to be restless and very greatly agitated. At this time he complained of pain in the head, but his temperature was not very much elevated, and his pulse but slightly quickened. On the morning of the 26th January, stiffness of the neck and difficulty in opening the jaws, slight spasms passing over him, like electric shocks, on the least provocation; an unhealthy appearance of the wound, pains radiating from it towards his body, warned us that we had to deal with incipient tetanus. From this time the disease developed rapidly, and exhibited in its course *all* the symptoms which have already been detailed, notwithstanding free purgation with calomel and jalap, large doses of bromide of potassium, a liberal use of morphine, and such nursing as his condition seemed to demand. As there was an irritation at the seat of the wound, which medicine could not reach, on the morning of the 31st January, nine days after the first operation, and five after the first symptoms of tetanus, I operated again, cutting as far back as the middle of the first metatarsal bone, and removing also the second toe at the metatarso-phalangeal joint. My idea was

to get back of the bifurcation of the inner branch of the anterior tibial nerve, as the irritation seemed to be chiefly in this nerve, and the branch to the second toe might have been one source of the irritation, from the fact that the outer side of the second toe had been frozen. I cut freely, used the strictest antiseptic precautions, and endeavored to remove all the diseased structures. Morphine was administered after the operation; and, in the afternoon of the same day, the following night, and the next morning, he felt better, and was able to take a considerable quantity of liquid food. In the evening of the second day, however, the change in his condition rendered it evident that the whole nervous system had become so irritated and excitable that, unless we could control the disease by medicine, there was no hope in his case.

On the 1st of February, I commenced the use of eserine, given hypodermically in $\frac{1}{30}$ gr. doses, every two hours, ordering it continued until some decided effect should be produced. After using it thus for five days without any appreciable effect—unless it might have been keeping the man from growing worse—I abandoned it, and returned to the use of large doses of k. br. every two hours, giving in connection with it, large doses of mist. assofætidæ *per orem* when the patient could swallow, and *per rectum* when he could not swallow. Besides these, frictions to the surface with stimulating embrocations, partial massage, and all the liquid nourishment he could take, were administered. His bowels were kept properly open; his stomach continued retentive, vomiting having occurred only a few times, and this being more from the spasm of the abdominal muscles, than from any trouble in the stomach itself. Phenyle was used all this time as a disinfectant dressing to the wound, instead of bichloride of mercury.

On the 14th of February, as all the symptoms still continued unabated, and the patient could obtain no rest, I ordered drachm doses of chloral hydrate to be given by enema, in a thin solution of starch at bed-time, and to be repeated *pro re natâ*. This had a decidedly good effect, for, after each administration, the patient obtained a short sleep and some rest. This was continued chiefly at night, and the pot. brom. during the day; though chloral hydrate was several times given *per orem* during the day. This sort of treatment was persevered in up to the 21st of February—seven days—when we dropped the pot. brom., and resumed the use of eserine during the day time, but continued the chloral hydrate at night. On the 28th February—seven days more—so unchanged was his condition under this treatment that it was difficult to say whether he was better or worse. The occasional opisthotonos, the almost constant trismus, the contractions of the abdominal muscles expelling large quantities of flatus; the sudden, violent, and excruciating spasms passing over him, and interfering with the action of heart and lungs, from the least excitement, made the prognosis very grave, insomuch that our chief hope of recovery rested on the fact that time was in his favor, he having now maintained the struggle for thirty-three days.

As the patient had by this time become accustomed to the remedies we had been using, and the symptoms were not indicating satisfactory improvement, I resorted to the tr. aconite in *m.* v. doses, as recommended by Mr. Timothy Holmes. It was given every two hours, and certainly had a good effect (or else nature was working the cure), for the pulse became slower, the rigidity less, the respiration easier, and the spasms not so frequent or violent. From the 1st of March up to the 12th, the aconite was continued in varying quantities, supplemented by pot. brom. and chloral hydrate, and the patient steadily improved, so that on the 12th he was able to have a hot bath. This last did him so much good that it was repeated almost daily; the same medicines were continued, and the patient steadily progressed towards recovery.

On the 25th of March the patient was discharged, cured, having had a run of fifty-eight days of a severe attack of traumatic tetanus.

TEMPERATURE.—On the evening of January 22nd, the day of the first amputation, his temperature rose to $101\frac{3}{5}$, but, by the following evening it had gone down to $98\frac{2}{5}$; on the evening of the 24th it reached $100\frac{2}{5}$, but went down again by the following morning to $98\frac{2}{5}$. From this point it played up and back within about the same limits, till the 1st of February—the day after the second operation, when it suddenly rose to 102; by the morning of the 3rd, however, it was down to 99°. Only once after this

did it rise high enough to cause anxiety, and that was on the 5th February, when it reached 101⅖; and it is worthy of note that at this period he had been taking eserine for four days. From this time onward the temperature gave no concern, as it ranged between 98⅖ and 100, once getting up to 100⅗, and once down to 98°.

The pulse kept up more persistently than the temperature, varying from 100 to 120 per minute, and not coming down to 90, or below, until after we had so freely used the aconite. The pulse was variable in volume, sometimes being full and bounding, sometimes small, feeble, and easily compressible. His skin was, most of the time, bathed in perspiration, as is the rule in tetanus. A bad odor exhaled from his body, besides the smell from his urine and fæces, which were frequently expelled into his bed by the tetanic spasms. Attempts to swallow food or drink, nearly brought on strangulation on several occasions; and, in consequence, he suffered at times on account of lack of nourishment.

His head was clear, and his mind unaffected, so that he fully realized all his sufferings. His respiration was very irregular, at times being quick and shallow, and at other times slow and deep, and often laborious and accompanied by heavy sighing. I need enter no further into details of symptoms, as nearly all symptoms belonging to tetanus were present in his case, at one period or another.

The treatment which I think benefitted him the most was that of large doses of pot. brom., assafœtidæ, tinct. of aconite, and chloral hydrate, together with the free hypodermic use of morphine. The eserine used may have done good—perhaps kept the patient from getting worse—but there was no marked effect from it. After using it for about ten days, then omitting it for about the same length of time, and then resuming its use again for several days, we could not perceive that its administration made any difference in the condition of the patient. I did not venture on curara, for I saw it used once and its effect was, I think, to hasten death; nor did I try cannabis indica, because, perhaps, I did not think of it, or did not consider it worth trying. Chloral hydrate and aconite were the most decided in their effects as anti-tetanic remedies, and next to these came the bromide of potassium. The hot bath had an excellent effect, but, of course, the patient was then changing for the better. The friction with a stimulating embrocation, and the massage, I think, did good; but I have no doubt that the second amputation was the *sine quâ non* to his recovery.

Some years ago, I tried, in a case of tetanus from a wound of the thumb, tincture of lobelia, tobacco enemata, bromide of potassium, chloroform, hot pediluvia, sinapisms, etc., without any avail, the patient dying on the 4th day. I have seen nearly all the standard remedies used and fail in the few cases of tetanus I have witnessed.

I have now outlined the treatment successfully pursued in the case of J.B.; but whether, when tried generally, it would be more successful than other methods or not, I am not in a position to say. Had I another case on hand, I should follow a similar course, namely, free purgation with calomel and jalap, morphine, pot. brom., assafœtidæ, chloral hydrate, aconite, eserine, stimulating embrocations, massage, a hot bath when possible, ice to the spine perhaps, quietness, and as much liquid nourishment as the patient could take.

Added to this course of treatment would be any other remedy which nascent symptoms might indicate, or which any peculiarity of constitution might demand, together with the best and most intelligent nursing which it would be possible to secure.

In Italy, Dr. Francesco Pavlini recommends subcutaneous injections of a one per cent. solution of carbol, at intervals of three hours, for the cure of tetanus; stating that in a very severe case in which warm baths and large doses of chloral hydrate had no effect, this treatment was successful—the temperature falling, and the severity and duration of the paroxysms being diminished, as early as the second day of its use. It was continued in gradually decreasing doses till the 27th day, when the cure was complete. In Bacelli's clinic, at Rome, a very severe case is said to have been successfully treated in a similar manner.

MORTON'S METHOD OF SPINA BIFIDA.

BY DR. JUNNER, OF KINGSVILLE.

Read before the Ontario Medical Association.

On March 1st, I was called to see a child 3 weeks old, who had a spina bifida situated at the junction of the dorsal and lumbar vertebræ,

The tumor was about the size of a duck's egg. Sessile and the opening communicating with the spinal cord large; the laminæ of two vertebræ being absent. The walls of the tumor were extremely thin in places and became very tense when the child cried or strained at stool. The mother had been attended by a midwife who undertook to cure the tumor by applying a salve, the effect of which with pressure had produced a superficial slough, and a small quantity of serous fluid was escaping from a minute puncture in this part of the tumor.

The child was large and well nourished. Complete in every other part. The parents were very anxious to have something done; so after explaining to them the dangers of interfering by operative procedure with such cases, and the possibility of hydrocephalus supervening, even though the tumor were cured, I resorted to Morton's method of injecting a solution of iodine, gr. 10, pot. iod., gr. 30, and glycerine, ℥i.

I tapped the tumor, without anæsthetising the child, with a small sized trocar and canula; drew off four drachms of fluid, and immediately injected through the canula one drachm of the iodine solution, allowing what would to escape, keeping up a gentle pressure around the base of the tumor to prevent the fluid entering the spinal canal. Considerable inflammation followed in the sac, and evidently caused pain for about four hours, after which the child was easy. I instructed them to keep a piece of lint saturated in a solution of tannin on the tumor continually, and again on the 7th, one week after, I repeated the operation. The sac was smaller and contained but one drachm of fluid. No untoward symptoms had followed the first operation, and as the signs were favorable the parents were anxious to proceed with the treatment.

Apparently much more pain followed the second operation, but neither convulsions nor symptoms of paralysis followed, and on the 18th, eleven days later, I repeated the operation for the last time. The walls of the sac were much thickened, and the tumor lessened in size, but there was evident fluctuation and tension when the child cried.

In my haste I forgot my injection fluid, but had some iodized phenol in my case which I used instead, first injecting ten minims of a 12% solution of muriate of cocaine to annul the pain, and immediately after one drachm of glycerine containing 15 minims of iodized phenol. I squeezed as much of this out as I could, put on a dressing of bichloride cotton and ordered them to dress the child. Within two minutes after the operation the child became restless; breathing labored and fast; pulse small, quick, and rapid; muscular twitchings occurred in the limbs and face, and a general convulsive seizure followed soon after; the head was drawn back; the spine arched forward; knees flexed on thighs, and thighs on abdomen; arms drawn up and rigid; thumbs in palms; cheeks drawn in; the under lip completely hidden beneath the upper jaw; abdominal muscles rigid but not retracted; eyes at times staring and then rolled up beneath the lid; the child, I think, did not lose consciousness. I put it in warm baths, gave brandy and bromide of potassium freely every few minutes, until within an hour all rigidity and convulsive twitchings passed off; the child became limp as a rag. I am not sure that it was not drunk. Surface warm but pale, and bathed in perspiration; pulse small, but soft and regular; vomited several times; could detect no odor in the vomited matter but the brandy; while in convulsions it urinated freely. It was reported next day all right but weak.

I saw it two weeks ago—nearly three months after first operation. It was in perfect health, large of its age, and very fleshy. The tumor was not larger than a pigeon's egg. Comparatively hard and non-fluctuating. No change in its appearance or feeling could be detected when the child cried or strained. The parents were satisfied to let well enough alone and so was I. The opening communicating with the spinal canal was not much, if any, smaller.

In the *British Medical Journal*, Oct. 20, 1888, Dr. Geo. Taylor reports a child, æt. 5 months, who had a spina bifida treated successfully by Morton's method.

In the following number of same journal Mr. Rundee reports a girl, æt. 2 years, who had been treated when five weeks old by same method, and who subsequently developed well marked hydrocephalus, but the tumor gradually contracted.

Nov. 20th, 1888, in *British Medical Journal*, Dr. Pearcy reports a case which he had cured by injecting the iodo glycerine solution.

HÆMOPTYSIS IN ELDERLY PEOPLE IN ABSENCE OF TUBERCULAR AND CARDIAC DISEASE.

BY A. M'PHEDRAN, M.B.,

Lecturer on Clinical Medicine in the University of Toronto.

In his work on pulmonary consumption, Dr. Theodore Williams thus formulates his conclusions on hæmoptysis, from the results of many thousand cases. Streaks of blood, as occur in the sputa of bronchitis and pneumonia, are set aside. Hæmoptysis may, then, arise from (1) alteration in the composition of the blood, as in scurvy, purpura, and, markedly, in hæmophilia. (2) From congestion of the lungs, through cold or alcoholism. In the latter, all organs are gorged with blood and friable, and more than a pint may be expectorated, and in congestion from cold he has seen the hæmoptysis exceed that quantity, and no pulmonary lesion be found after death. (3) Cancer, and hydatids of the lungs. (4) Disease of the heart and great vessels, especially aneurism of the aorta—these are common causes. (5) Strain on the heart from over-exertion, resulting in pulmonary congestion. (6) Embolism and thrombosis of pulmonary vessels. (7) Disease of menstruation. (8) In bronchiectasis much blood spitting may occur. And (9) injuries to the thorax and lungs.

Now, if we except these causes, he says, we may lay down as a law that hæmoptysis, exceeding one ounce in amount, is due to changes in the pulmonary blood-vessels, connected with phthisis. Like all laws this, too, has its exceptions.

Last year, Sir Andrew Clark described a rare form of hæmoptysis, occurring in elderly people* who were then, and remained, free from evidences of pulmonary tuberculosis or cardiac disease. In these cases the hemorrhages were usually moderate in quantity, and recurred at short intervals. It sometimes persisted for days. In all his cases there appeared to be some bronchial catarrh, with slight emphysema, and a rheumatic tendency. In two fatal cases the bronchial mucosa was found inflamed; the anterior parts of both lungs were pale, dry, and emphysematous; in the lower and back parts of both lungs, which were deeply congested, were many patches of emphysema surrounded by hemorrhagic extravasations. There was no evidence of tubercle, cancer, or any coarse change that could lead to hemorrhage.

A microscopic examination showed that wherever there was an emphysematous patch there was a diseased artery; and if the artery was much diseased the capillaries and veins were also affected; and generally, if the artery was obstructed and degenerating, there was hemorrhage. Clark's opinion is that the disease of the artery was the first to occur, resulting in a deficient supply of blood to the part involved; then followed the degeneration of the venous radicles and capillaries, causing, in turn, true atrophic emphysema. The strength of the vessel-wall being thus impaired, increased blood pressure from thrombus, or other cause, led to rupture and extravasation. The change in the vessel-walls was found to consist chiefly in a hyaline infiltration of the middle and internal coats of the vessel, similar to the changes found in the vessels of diseased articulations of arthritic cases, hence he suggested the propriety of applying the term "arthritic hæmoptysis" to such cases.

The following case probably belongs to this interesting class: Thomas N., aged 60, a nervous, energetic man, a large manufacturer. Had always been healthy. Was addicted to alcoholics some years ago. In the effort to break the habit he acquired an appetite for chloral, and to get rid of that became addicted to opium, which he had taken regularly for the last fifteen years. Has had slight rheumatic attacks, to the extent of slight pains in the shoulders and other joints. On account of the loss of his teeth, he had lived on a slop diet for the last few years. In October, 1889, he had a sharp attack of bronchial catarrh with troublesome cough. The pulse was full and hard; the anterior walls considerably calcified. The urine rather dark, scanty, and high sp. gr.; bowels rather constipated. The chest in front was somewhat hyper resonant, there being evidently slight emphysema. Chloride of ammonium was given for the bronchitis, and nitro glycerine to relax the arteries and relieve their tension. The bowels were moved freely. He

* *Brit. Med. Journ.*, vol. I, 1888, p. 1162.

made a satisfactory recovery. He was cautioned of his danger, especially of apoplexy, on account of the high arterial tension and diseased vessel-walls, but he was too busy to heed advice.

On the night of November 6th, fairly free hæmoptysis occurred, probably a pint of blood being coughed up. At five in the morning the pulse was 90, strong and full, respiration about 22, temp. normal, and continued so. He was ordered magnesia sulphate, one drachm, in a small quantity of water, hourly, until the bowels were moved freely; and nitro-glycerine, $\frac{1}{50}$ grain, every three hours, to relax the pulse. By evening, two free alvine evacuations had occurred, but the pulse was little altered. Nitro-glycerine, $\frac{1}{75}$ grain, was continued, the result being carefully watched, and the saline given three times a day and calomel at night, to keep bowels open. Next day the pulse was softer, the urine fairly abundant, sp. gr. 1018; no albumen; pale. Hemorrhages in lessening quantities recurred for three days; cough was not troublesome. Careful examination of the lungs revealed no evidence of disease except, perhaps, slight hyper-resonance on each side of the sternum. The chief trouble after this was in overcoming the opium habit; he was kept in bed for a couple of weeks, with daily massage and good personal care. He improved satisfactorily, the craving for opium soon ceasing, but he was kept in his room for nearly two months. The magnes. sulph. was replaced by Hunyadi mineral water, and later by Carlsbad salt, as being a better diuretic. His health has been excellent since.

In this case the cause of the hæmoptysis is certainly not included in Williams' list of causes already quoted; it resembles closely those described by Sir Andrew Clark, and was probably due to the same cause. In the treatment of these cases, Clark is very emphatic in the assertion that the hemorrhage is aggravated, or at least maintained, by the methods usually followed in hæmoptysis, by the frequent administration of large doses of the strong astringents, of ergot, the application of ice to the chest, and by the free indulgence in liquids, to allay the thirst which the astringents create. For my own part, it is at most only in exceptional cases that I have seen unmistakable benefit result from such treatment in hæmoptysis of any kind; at present, I cannot recall such a case. Fortunately, Clark's paper came to hand while the case given was in progress, and I was gratified to find myself carrying out a general plan of treatment in close accord with that recommended by so eminent a practitioner.

The indication for treatment seemed to be to secure elimination from the blood of waste products which the hard pulse and scanty urine showed were in excess in that fluid, and, in all probability, were largely, if not wholly, the immediate etiological factor in the production of the hemorrhage. It was with this object in view that the sulphate of magnesia was given to act freely on the intestinal tract; and nitro-glycerine to relax the arterial tension and prevent rupture of a vessel in some other organ, also to promote excretion by the kidneys. That the sulphate of magnesia has great influence in arresting bleeding in many cases of hæmoptysis, I have seen undoubted evidence in a goodly number of cases. In one case, a gentleman in the drug trade, who has been the subject of repeated hemorrhages for the last fifteen years, due to some undiscoverable cause, though probably phthisical, the attacks of bleeding are nearly always preceded by a feeling of general fulness. On my advice, as soon as this feeling is perceived, the amount of liquid taken is reduced to a minimum, and one-half drachm doses of the sulphate are taken in one or two drachms of water every hour until a free evacuation is obtained. The feeling of fulness then passes off and no hemorrhage occurs; but if the sulphate is neglected, the bleeding always follows.

NOTES ON A CASE OF PAROXYSMAL HÆMATURIA.

[redacted]

I have preferred to use the above name rather than the more generally accepted ones of hæmatinuria or hæmoglobinuria, because there may be a doubt in the case I am about to relate; whether it was not one of true discharge of blood through the kidneys, although repeated microscopic examinations failed to detect the presence in the urine of blood corpuscles, and the marked icteric tint would seem to indicate that free hæmoglobin was present in

the blood, and that dissolution of the blood corpuscles occurred in the systemic circulation, and was not confined to the kidneys. Although the disease is comparatively rare, yet a good many cases are recorded; but it is remarkable how few seem to have terminated fatally, and afforded opportunity for *post mortem* examination, and in those few that I have been able to find recorded, although some lesion of the kidney has been found, as in case by Murri, where tubercle was present in both kidneys, with collections of pigment in the cortical tubes, and in one recorded by Otto. The patient, W. H., first came to me on Nov. 8th, 1885. He was then 35 years of age; a shoemaker by trade; married twice; four children by first wife; had been a carter; never very robust. About eight years previously, while carting, had been crushed between the wheel of his cart and a wall on his left side. He had suffered severely at the time, and was laid up for some weeks. When able to get about again, was unable to resume the more laborious occupation and took to shoemaking, and had fair health until about a year previous to my seeing him, when he began to lose color and strength and noticed that his urine was at times dark and at other times light-colored and natural in appearance; he had no pain, but previous to passing dark urine would experience a sensation of weight in the right loin. When I saw him he had a pallid exsanguine countenance, with a peculiar bright yellow tinge, most marked about the face and eyes; he had just passed urine of a dark porter color, with an abundant chocolate-colored flocculent sediment; specific gravity 1022; acid containing a slight trace of albumen; under the microscope the sediment showed abundant granular tube casts and granular debris, but no blood-cells. The blood reaction was readily obtained by the guaiacum test; his breath was short, especially on exertion; the lungs and heart were apparently sound; his appetite good and bowels regular; color of stools normal; the next time he passed urine it was normal in color and appearance; I found no albumen or tube casts; he never had malaria or lived in malarious neighborhoods, nor had he had syphilis; he had always been temperate in his habits; but without, as I have said, ever being very strong, had always been fairly healthy. On enquiry, I found that the attacks of hæmaturia occurred with variable frequency, sometimes daily and sometimes not for several days; under tonic treatment, iron, etc., he improved in health and color, but the occasional attacks of hæmaturia continued; astringents, such as gallic acid, were useless, but under the administration of ergotine in 3 grain pills, they became much less frequent; so much so that he, of his own accord, would resort to them whenever the attacks came on. After the first three months, from occurring three or four times a week, they diminished in frequency gradually, till during the last year or two of his life, he would often go two or three months without an attack. The phenomena attending them were always the same; they would be induced by over-fatigue or exposure to cold; a sensation of chilliness would come on, accompanied by the feeling of weight in the right loin; the complexion, always pallid, would change to a bright light yellow, and in an hour or so he would pass urine of a dark chocolate color, once or twice, rarely more; after which it would be clear and natural as before, and in a day or two his complexion would clear up again. So invariably was this the case, that I was usually able to tell by his appearance on coming into my office that he was either about to pass bloody urine or had just done so. The character of the urine was always, as I have described, normal in the intervals, but during the attacks having all the characteristics of bloody urine, save that blood corpuscles were absent. During the time that I was attending him, a little over four years, his wife miscarried twice at about three months, and had two healthy living children. On January 13th, while the epidemic of influenza was at its height, he came to my office with the initial symptoms of influenza, chill, headache, etc., and a short time after passed bloody urine once or twice; he then remained free from an attack till the 28th, when a second attack occurred; this was succeeded by oozing of blood from the gums, and the frequent passage of the black tarry stools, which persisted for several days in spite of all treatment, and he died exhausted on Feb. 6th. No recurrence of the hæmaturia took place after the 28th of January. A *post mortem* examination was made seven hours after

death by Drs. Henderson, Mundell, and myself. The body was well nourished; very pale; the abdomen only was examined; there was about half an inch of fat on the abdominal walls, and the omentum and mesentery were loaded with soft fat; the stomach was disturbed with gas and fluid, pale but healthy; the intestines contracted and pale; the liver small, slightly fatty, but not otherwise diseased; the gall bladder distended; the spleen normal in appearance, rather small; the right kidney was normal in size and appearance; the left kidney about twice the natural size; the pelvis filled with soft fat that nearly obliterated its cavity; nearly the whole of the medullary and the greater part of the cortical portion was infiltrated with fat, by which the characteristic structure appeared to be destroyed and replaced, a few small patches only retaining the normal appearance. Owing to the objections of friends, we were unable to take it away for microscopical examination. The left ureter was normal in calibre and appearance, except that a short distance from the kidney it bifurcated and was double for four or five inches, when it joined again and entered the bladder single; the bladder was moderately distended with pale urine, the mucous membrane lining it being pale, but otherwise healthy. The patient evidently died of some other disease, and, though the left kidney was found enlarged to double its normal size, yet the writers agree that the changes noticed were insufficient to account for the phenomena. Indeed the majority of writers on the subject seem to be agreed that the original source of the discharge of blood-stained urine is not to be found in the kidney, but is to be sought either in the nervous system or in a pathological condition of the blood itself, and this view is borne out by the peculiar phenomena attendant on the occurrence of the paroxysm, these being generally brought on by exposure to cold, and commencing with a sensation of chilliness. This initiatory chill, however, seems to me to be no more than the consequence of the sudden escape of the contents of the blood corpuscles, and is paralleled by the chilly sensation that attends a sudden and copious flow of blood under any circumstances. I have just said that the majority of writers (as far as I have been able to find) regard the dissolution of blood corpuscles as occurring independently of any kidney lesion, but there are some exceptions to this view. Dr. Stephen Mackenzie, in his elaborate article on this disease published in the *Lancet* in 1884, says that he formerly thought that the kidney was the seat of the change, and that Murri held the same view but had discarded it, and he himself in the light of recent investigations felt it necessary to reconsider the question. Sir W. Gull believes there is reason for thinking that a blow or injury to the loins may be the cause of this affection, and cites a case in point; and Roberts, both in his work on urinary diseases, and in the article on the subject in Reynolds' System of Medicine, whilst admitting that injury may cause hæmaturia or even hæmatinuria, would hesitate in the absence of further evidence to accept injury as a cause of paroxysmal hæmatinuria. He regards the pathology as obscure, but it is clear that the kidneys themselves are affected, the symptoms pointing to sudden but transitory congestion of the renal capillaries, with escape of their contents, but without rupture of their walls. Into the relation that the nervous system bears to the attacks I do not propose to enter; this part of the subject has been carefully investigated and as thoroughly discussed as the present state of knowledge will allow by many, notably by Dr. Stephen Mackenzie, in the article already referred to, and also more recently in a very interesting paper by Drs. Bristowe and Copeman, published in the *Lancet* last year, recording a series of experiments performed by themselves on a patient under their care. My chief object in relating this case is to show that in some instances, at any rate, the disease may be dependent upon kidney lesion, and also to point out that owing to the infrequency with which it proves fatal, and the consequent paucity of *post mortem* examinations, the assumption that is made by most observers that the blood change takes place elsewhere than in the kidneys, and that such structural disease as has been noticed is insufficient to account for it, is based rather upon theoretical grounds than upon actual observation. It seems probable that there are at least two distinct causes for the affection; that just as jaundice may be of hepatogenous or hæmatogenous origin, so paroxysmal hæmaturia may be of

local or of general origin, and that the case I have just related, and those referred to by Mackenzie, Harley, Gull, Bristowe, and other similar ones, were due to local disorder; while those met in malarial districts, as described by Flint and Tyson (in Pepper's System of Medicine), owe their origin to that general derangement of the nervous system and disorganization of the blood that intense malarial poison is capable of inducing. This distinction is a matter of considerable importance as regards treatment, because if it is true that, in the one case, the disease consists in perverted action of the vasomotor nerves of the kidney, those remedies might be expected to prove serviceable which, like ergot, have a direct action upon these nerves, and this I found to be true in my case; while, in the other, such medicines would probably prove useless, and benefit would be more likely to follow an antimalarial treatment. It is rather singular that those American authors whom I have referred to, and Bartholow, ignore the existence of paroxysmal hæmaturia of other than malarial origin, and speak of the disease as though it were invariably due to that cause.

Selections.

CEREBRAL LOCALIZATION.

The Croonian Lectures on Cerebral Localization, delivered by David Ferrier before the Royal College of Physicians of London, have recently been published. In these lectures the author's purpose was to sketch the evolution of the doctrine of cerebral localization and to indicate the principal data on which it is based, and to discuss, in the light of the most recent investigations, the evidence for and against the existence of specific centres, and their exact position in the cerebral cortex.

Before considering the facts bearing directly upon the specific localization of function in the cerebral cortex, the effects of ablation of the cerebral hemispheres in different classes of animals were considered. Recent researches on the effects of the removal of the cerebral hemispheres, by improved methods, have necessitated some important modifications of the doctrines which, up to quite a recent date, have been entertained on the subject.

Beginning with *fishes*, it was stated that, when in osseous fishes, the ganglia (which correspond morphologically to the cerebral hemispheres of vertebrates) are entirely removed, there is little, if anything, to distinguish them from perfectly normal animals. They maintain their normal attitude and use their tails and fins with the same vigor and precision as before. A fish without cerebral hemispheres can see, distinguish colors to some extent, catch its prey, discriminate between different kinds of food, direct its movements with precision, and, in fact, behave, to all appearances, like a normal animal.

Frogs deprived of their cerebral hemispheres behave, *cæteris paribus*, essentially like fishes similarly treated; they maintain their normal attitude and resist all attempts to overthrow their equilibrium. It would, in fact, be difficult, so far as their movements and response to peripheral stimuli are concerned, to distinguish between a normal and a brainless frog. If the back be gently stroked, the frog will answer uniformly with a croak, as if of pleasure or enjoyment. Like the fish, it possesses some form of vision. It has been shown, moreover, by the recent experiments of Schrader, contrary to the views formerly held by most observers, that removal of the hemispheres deprives the frog neither of spontaneity nor of special instincts, nor of the ability to feed itself. It would appear, therefore, if these observations are correct, that the brainless frog behaves precisely like the brainless fish above described.

Birds.—After removal of the cerebral hemispheres of pigeons they show no disturbance of station or locomotion. Left to themselves, they appear at first, at least, to be plunged in profound sleep; from this condition they are easily aroused by a gentle push or pinch. They start at loud sounds, such as a pistol-shot, made in their immediate vicinity. The question as to the sense of sight in brainless pigeons has been much discussed. Schrader, however, finds that, within a few days after the operation, these pigeons behaved in such a manner as can only be explained by their still retaining some form of vision; they not only avoid obstacles in their path, but appear able to fly from one place and alight securely on another. We are thus obliged to class birds with fishes and frogs, which, with-

out doubt, retain their sense of sight, and guide their movements accordingly, notwithstanding the complete removal of their cerebral hemispheres.

Mammals.—While the removal of the cerebral hemispheres (including *corpora striata)* in the lower vertebrates is compatible with survival for a considerable length of time, the case is different with mammals. In these the operation causes fatal shock, or is followed by secondary effects which result in speedy death. For this reason it is not found possible to determine, as in the lower vertebrates, what functions, after considerable lapse of time, might still be exhibited by the lower centres in the entire absence of the higher. The hemispheres have been removed from rabbits and guinea-pigs—all spontaneity seems to be abolished; but it is usual for the animals, after the period of quiescence has passed, to make apparently spontaneous running movements, which, however, are found to depend upon irritation, caused by the secondary changes set up in the wound.

Whether, after the removal of the cerebral hemispheres, rabbits and other rodents can see, is a question which has been the subject of lively controversy. The question is one which cannot be said to be definitely settled, though the facts mentioned in regard to fishes, frogs, and birds, would incline one to believe that the conclusion arrived at by Christiani, in his experiments, is correct. He is of opinion that, although they do not see like normal rabbits, they are still able to guide their movements in accordance with retinal impressions. Goltz, by repeated operations, destroyed a large extent of both hemispheres of two dogs; he thus describes their condition: "Both animals were essentially only wandering, eating, and drinking; reflex machines. Both were utterly indifferent to man and beast. Both had obtuseness of all their senses. Each had sensation in every part of the skin, and effected movements with all its muscles. Neither exhibited any expression of pleasure; on the other hand, both were easily roused to wrath. Both were profoundly demented."

Dr. Ferrier remarks that the impairment of all the sensory and motor faculties in these and other dogs operated upon by Goltz—in which it is certain that not one of the specific centres was entirely destroyed—would, without doubt, have been more profound than in rabbits and guinea-pigs, had it been possible to extirpate the hemispheres entirely; and when we come to consider the effects of partial cerebral lesion in man, we shall see reason for believing that if in him the whole of the hemispheres were removed, providing this were compatible with life, there would be such complete and enduring paralysis of motion and annihilation of all the forms of sense, that scarce a trace would remain to those responsive and adaptive reactions which survive the removal of the cerebral hemispheres in animals lower in the scale.

It thus appears that, notwithstanding the complete extirpation of the cerebral hemispheres, animals, in proportion to their lowness in the scale, besides duly retaining and regulating all their organic functions, remain possessed of varied powers which may be classed, generally, under the heads of equilibration, co-ordination of locomotion, emotional expression, and adaptive reactions, in accordance with impressions made upon their organs of sense. These are organized in the mesencephalic and spinal centres in the highest degree in fishes, frogs, and pigeons, to a less degree in the lower mammals, and least of all in monkeys and in man.

The question as to whether the actions of the lower centres are indicative or not of intelligence, was briefly discussed. We are entitled to say that the activity of the lower centres does not affect the consciousness of the individual; for when, by lesion of the internal capsule, the sensory tracts are cut off from their cortical connections, the individual has absolutely no consciousness of impressions made upon his organs of sense, so that we may conclude that, in man at least, states of consciousness are indissolubly connected with the activity of the cerebral hemispheres. There seems to be nothing which can, *a priori*, be urged against the notion that the various factors of intelligence have their substrata in definite regions, specially related to certain motor and sensory functions.

Dax (1836) established the special relation of aphasia to right hemiplegia and lesions of the left hemisphere; but the connection between aphemia, or aphasia and lesion, more particularly of a definite region of the left hemisphere, namely, the base of the third frontal convolution, was pointed out by Broca (1861). The

next great advance in cerebral localization was made by Hughlings Jackson (1861), who, from a study of the forms of epilepsy, now appropriately known by his name, furnished cogent reasons for believing that certain convolutions near, and functionally related to, the corpus striatum had a direct motor significance. The whole subject of cerebral physiology and pathology was revolutionized by the discovery, first made by Fritsch and Kitzig in 1870, that certain definite movements could be excited by the direct application of electrical stimulation to the definite regions of the cortex cerebri in dogs.

The characters and conditions of the excitability of the cerebral cortex were discussed. In normal states, the grey matter of the cortex is entirely, or almost entirely, insensible to mechanical stimulation; when, however, the cortex becomes inflamed and congested by exposure, or traumatic lesion, it becomes irritable to mechanical stimulation. The most effective excitant is the application, by closely-approximated electrodes, of a galvanic or a faradic current of moderate intensity. When an animal is sufficiently narcotised to abolish all restless or spontaneous movements—and the anæsthesia must not be too profound, else all reactions cease—the application of the electrodes to different regions calls forth definite motor reactions with such uniformity that, when once the limits of the said region have been accurately defined, one may confidently predict the exact movement which will occur in animals of the same species. This fact, which is beyond all dispute, has been frequently demonstrated by Ferrier, Horsley, and others. The chief objection to the direct excitability of the cortex itself is found in the fact that, even after removal of the cortex, similar reactions are still obtainable when the electrodes are placed on the subjacent medullary fibres. It is, *a priori*, most likely that there is also functional differentiation of the cortical centres to which the medullary fibres are distributed, and that the grey matter is, under normal conditions, the natural excitant of the reactions which we are able to produce by artificial stimulation with the electric current, and a comparison of the respective reactions of the cortex and medullary fibres indicates such differences as can only be explained on the supposition that the cortical centres are themselves excitable. A much stronger current is necessary to produce the ordinary reaction by exciting the medullary fibres. The time lost between the application of the stimulus and the occurrence of the muscular contraction is much greater in the case of the cortex than in that of the medullary fibres. The significance of this fact is, that the grey matter does not act like an inert layer which merely allows transmission of the electric current to the medullary fibres, but like other nerve centres, stores up and transforms the stimuli which it has received into its own energy. There is also a characteristic difference in the muscular curves registered on stimulation of the cortex and medullary fibres respectively. The effects of localized destruction of the cortex are the counterpart of those of irritation, however produced, and we may conclude from this that there is the same functional differentiation of the cortex as in the medullary fibres.

The lecturer then described in detail the phenomena of electrical irritation of the brain of the monkey, more especially as determined by his own experiments and those of Horsley, Schafer, and Beevor, which, though in all essentials confirming his own, have been marked out with more elaborate detail and minuteness.

The *prefrontal lobe* gives no, or very doubtful, response to electrical stimulation. *Behind this and anterior to the precentral sulcus*, stimulation causes opening of the eyes, dilatation of the pupils, and movements of the head and eyes to the opposite side. At the upper extremity of the central convolutions—ascending frontal, ascending parietal, and postero-parietal lobule—and extending over the margin of the hemisphere into the posterior part of the marginal convolution, or para-central lobule, electrical stimulation causes movements of the lower extremities.

Below the leg area and partly in front of it and occupying the middle third, or rather two-fourths, of the central convolutions, there is a region, stimulation of which causes movements of the upper extremity. Corresponding regions were indicated in the brain of the dog, cat, and rabbit.

Below the arm area, and occupying the lower third of the central convolutions there is a region, stimulation of which causes movements of the face, mouth, and tongue.

It has further been demonstrated by Semon and Horsley that excitation of the lower extremity of the ascending frontal convolution causes phonatory closure of the vocal cords.

The areas for the head and eyes, arm and leg, extend over the margin of the hemisphere into the mesial aspect or marginal convolution.

Excitation of this marginal convolution from before backwards causes movements of the spine, tail, and pelvis; behind these, extension of the hip, flexion of the leg, and lastly, movement of the foot and toes.

Stimulation of the angular gyrus causes movements of the eyeballs, and occasionally of the head, to the opposite side.

Excitation of the occipital lobe causes movements of the eyeballs, but less constant and less easily excited than from stimulation of the angular gyrus.

Stimulation of the superior temporal gyrus causes pricking of the opposite ear, opening of the eyes, dilatation of the pupils, and direction of the head and eyes to the opposite side.

Stimulation of the hippocampal lobule or anterior extremity of the hippocampal gyrus in monkeys, dogs, cats, and rabbits, cause torsion of the nostril on the same side, as if from irritation applied directly to the nostril itself.

Whether complete parallelism obtains between the brain of the monkey and the brain of man is a question which, until recently, could only be answered by reference to the facts of localized lesions.

Movements of the opposite sides of the body have been observed by stimulation of the cortex through the dura mater. Recently, surgeons have, on many occasions, resorted to gentle faradization of the cortex, in order to define accurately the regions which they desired to extirpate for the cure of focal epilepsy. One case has been reported by Horsley, another by Keen. The results correspond very closely with the position of the various centres as already defined.

Two other cases are recorded, and the following comment is made: All these results are in close harmony with those obtained on stimulation of the cortex of the brain of the monkey; therefore, we have reason to believe that, *cæteris paribus*, the functional relations of the human cortex are identical with those of the lower animals.

Facts may be adduced which justify the conclusion that the areas, as a whole, are as completely differentiated from each other as the limbs themselves, or one organ of sense from another.

The question as to the signification of the motor reactions which result from the electrical stimulation of the different cortical regions is disputed. The method of excitation itself is not competent to solve these questions, and requires, as a complement, the strictly localised destruction of those areas, stimulation of which gives rise to definite motor reactions.

A careful consideration of the reactions in different orders of animals, and the fact that similiar movements are in some cases excitable from different cortical regions, led Ferrier to believe that they might have various significations, and he formed the hypothesis that some might be due to stimulation of motor regions proper, while others might be looked upon as the associated expression of subjected sensation. On this hypothesis he instituted localized destructive experiments, and thus determined the existence of sensory or perceptive centres, respectively related to the different forms of sensibility, as well as of centres, more especially, if not exclusively, motor in character.

The existence of distinct sensory centres has been confirmed by succeeding physiologists and clinical research, and Ferrier has the satisfaction of thinking that such errors as he has committed in the delimitation of the various sensory regions have been errors more of omission than of commission, and that the localities in which he originally fixed the respective sensory areas correspond, in part at least, with the position assigned to them by the most reliable experimental clinical methods.

THE PATHOLOGY OF GENU VALGUM, OR KNOCK-KNEE.

BY PROFESSOR HUMPHRY, F.R.S.

Mr. Keetley's paper on "Genu Valgum," in the number of the *Illustrated Medical News* for December 7, suggests to me to make a few remarks on the pathology of the affection.

I have for many years taught that the *essential* feature of genu valgum is a *deficiency in growth at the outer part of the lower epiphysial*

line of the femur. If a thigh bone be placed with its lower articular surface upon a table or any horizontal plane, in the position which it normally occupies in the erect posture, a plumb-line would fall from the upper weight-receiving part of the head of the bone, obliquely, through the shaft and through the *outer* condyle (not between the condyles). This, therefore, is the line of weight, and the weight is borne chiefly upon the *inner* part of the shaft above, and below upon the *outer* part of the shaft, the *outer* part of the epiphysial line, and the *outer* condyle. To enable it to fulfil its greater weight-bearing function, the outer condyle, as compared with the inner condyle, is broader and flatter beneath; and a section shows it to be composed of denser cancellous plates, which have a more vertical disposition.

Further, owing to the inclination inwards of the thigh as it descends (which, by the way, is a human feature associated with the width of the pelvis and the erect posture), the muscular traction, viz., that of the *quadriceps extensor*, through the patella, that of the abductors *glutæus maximus* and *tensor vaginæ femoris*, through the ilio-tibial band, and that of the *biceps flexor*, which enjoys the advantage of leverage afforded by the projecting head of the fibula, is in all positions exerted chiefly upon the outer condyle. This conformation and relation of parts, added to the great leverage given by the thigh above and by the leg below, make a demand—rather throw a difficulty—upon the growing force in the outer part of the epiphysial line, which in some young, perhaps rickety, persons it is not quite equal to meet and overcome. It has to be observed that the growth at this epiphysial line is greater and more prolonged than at any other part of the frame. The growth also takes place almost entirely on the shaft side of the line, the addition to the epiphysis from it being slight. The defect, therefore, to which, in the main, I attribute the deformity of knock-knee, is an imperfection in the growth of the *outer* and lower part—the supra-condyloid part—of the shaft of the femur; and the imperfection is to be attributed to the insufficiency of the growing force in this part of the epiphysial line to overcome the resistance offered by the weight of the body and the traction of the muscles.

When the knee affected with this deformity is bent, two things are observed: *First*, that the leg loses its outward slant and assumes its proper direction, viz., in the same plane with the thigh. This is owing to the fact that the circumference of the condyle acquires its normal dimensions, inasmuch as the growth here is not interfered with by any undue pressure, and the hinder, rounder part accordingly projects backwards to the same level as does the corresponding part of the inner condyle. *Secondly*, that the patella has not its usual prominence anteriorly, which is in consequence of the absence of that prominence of the lower part of the outer condyle whereby the patella in the naturally formed knee is carried forward so as to constitute the foremost and most conspicuous feature of the flexed joint.

In the examination of specimens in many museums at home and abroad, by which the above views were confirmed, as they were still further confirmed by the observations of Mikulicz, I have seldom had reason to think there has been any undue amount of growth of the inner condyle or of the part above it; and such hyper-growth, especially unsymmetrical, in an epiphysis or part of an epiphysis, is very rare. I may add that it is difficult to see how the deformity could be produced by a relaxation of ligaments, or by any other cause than an obliquity of one or both of the articular surfaces of the bones of the joint.

Although I thus believe that the essential feature in the pathology of knock-knee is an obliquity of the under part of the articular surface of the femur, consequent on impaired growth of the lower and outer, or supra-condyloid, and chief weight-bearing part of the shaft of the femur, I am well aware that other causes may combine with this one or may exist without it. Such are (1) a similar interference with growth at the outer part of the epiphysial line of the tibia, inducing an obliquity of the articular surface of that bone. This is usually less marked than the corresponding defect in the femur, owing probably, in part, to the less amount of growth which takes place at the upper end of the tibia, as compared with that at the lower end of the femur. (2) The incurving of the lower part of the shaft of the femur, or of the upper part of the shaft of the tibia,

or of both, after the manner commonly seen in the shafts of rickety bones.

A deficiency in cell-formation and a deficiency and irregularity in bone-formation at epiphysial lines are common features of rickets, and cause the deficiency of growth, especially in the lower limbs, of rickety persons. Though the cell-formative processes are deficient, the bone-formative processes are still more so. This causes that relative super-abundance of unossified cells which led to the mistaken idea of an actual super-abundance of them: and this causes also that bulging of the circumference of the epiphysial cartilages which is commonly observed in rickety children at the lower end of the radius, at the sternal ends of the ribs, and, to a less extent, at the bones of the knee and ankle. It is this deficiency in the power of cell-formation and ossification manifesting itself in the lower and outer weight-bearing part of the femur, and in a less degree and less often in the subjacent part of the tibia, which is the common cause of knock-knee, though, as I have said, other rickety manifestations in either or both of these bones may lead to, or contribute to, the same result; and bulging at the weak and yielding parts of these epiphysial lines may not uncommonly be detected.

I may observe that in the ordinary lateral curvature of the spine it is a similar deficiency of growth and ossification, together with bulging, at the upper and lower epiphysial lines of the centre, or bodies, of the vertebræ on one side, together with a flexure or yielding of the bodies themselves, which is the prime feature of the deformity, and which is brought about by the weight being allowed to fall unduly upon that side: lateral curvature and knock-knee being therefore alike of a rickety nature, though both not infrequently occur after the period of life at which rickets usually manifests itself in other bones. The rickety spine of the infant is usually manifested in a bending backwards of the column at the lumbar and lower dorsal parts, and indicates a difficulty in evolving that specially human feature of the column, the anterior dorsi-lumbar curve.

With regard to treatment, I would only remark—*First*, as a preventive, that children should not be encouraged or allowed to stand and walk early, especially when the bones are large. *Secondly*, the natural growing forces will commonly rectify slight abnormalities in the young. In bad cases, which are met with almost exclusively among the poor, where proper attention, etc., cannot be given, I have long used a simple frame, consisting of two light wooden splints united below by a thin band of metal with footpieces and united above by a narrow semi-circular bar of metal. In this frame the child is seated, with the feet on the foot-pieces and the buttocks within the semi-circular bar, the whole being well padded; and the limbs are bandaged to the side splints so as to prevent walking, and therefore prevent any weight being thrown upon the limbs, and so as to exercise pressure upon certain parts of the limbs as may be required—upon the inner side of the knees, for instance, in knock-knee. The limbs and the child may be released at night, and the frame reapplied in the day, or it may be kept on night and day. I have found this very effective in remedying the rickety deformities of the lower limbs in children. *Thirdly*, in more severe cases, and in older children, osteotomy is required.—*Journal of Anatomy and Physiology.*

THE

Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of interesting descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

Whatever changes of address are desired, please notify the Publishers, THE J. E. BRYANT COMPANY (*Limited*), 58 Bay Street.

TORONTO, SEPTEMBER 16, 1890.

THE CANADIAN MEDICAL ASSOCIATION.

The annual meeting of the Canadian Medical Association was held in Toronto on September 9th, 10th, and 11th, in the building of the Education Department in St. James' Square. The attendance was not as large as was expected, there being only 100 present. The unusually large meeting of the Provincial Society in June probably interfered, to a certain extent,

with the success of the September meeting. Apart from this, however, the number of members from distant parts of the Dominion was remarkably small. Dr. Chown, of Winnipeg, and Praeger, of Nanaimo, B.C., were the sole representatives of the vast territory extending from Western Ontario to the Pacific Coast. Dr. Muir, of Truro, N.S., alone represented the Provinces down "by the sea." Fortunately the quality was good while the quantity was small, but, all the same, that won't make what they call a *big meeting*. The "Montreal contingent" were on hand in full force, and contributed much towards the success of the meeting intellectually and otherwise. Ottawa sent Sir James Grant and Drs. Harry Wright and Prevost.

Although the meeting was not large, it was a pleasant and successful one in all respects. Many excellent papers were read and freely discussed. We hope to publish some of these and expect to give a full report of the proceedings in our next issue. We were much pleased to see Dr. W. Warren Potter, of Buffalo, a guest of the Association. The many friends he made in Toronto will gladly give him a cordial welcome when he visits us on future occasions. The visitors were well entertained by the Torontonians. There was a very pleasant yacht excursion on the afternoon of the 10th, in the Oriole, Aileen, and Abeona. Commodore Ross was in command, but at a critical moment when the waves were running high, and one side of the yachts was running low, the skilful and daring veteran from the East, Admiral Rogers Tomme, assumed control, and saved the fleet from shipwreck and general disaster. A banquet was given by the Profession of Toronto on the evening of the 11th, in the Queen's Hotel, and passed off very pleasantly indeed. We have not space for much of a personal nature, but we cannot refrain from saying a word for the President, Dr. James Ross. His untiring efforts in the interests of the Association, and the members present, contributed very much indeed towards the success of the meeting in all directions.

The next meeting will be held in Montreal, under the Presidency of Dr. T. G. Roddick, who has been for many years one of the most able and enthusiastic workers in the Association. Dr. James Bell had made certain arrangements for next summer which would prevent him from acting as Secretary, and the Committee on Nominations very reluctantly allowed him to retire. Dr. Birkett, of Montreal, was elected General Secretary, and Dr. W. H. B. Aikins, Treasurer (re-elected).

HYPNOTISM.

Between twenty and thirty years ago it was quite the fashion for travelling *professors* to make public exhibition of their powers in mesmerism. The favorite subject for such experiments was a respectable, innocent, rather weak-minded citizen, who could be brought quickly and completely under the *spell*. That such exhibitions were highly successful from the *professor's* point of view, cannot be doubted. The amateur mesmerist was frequently called in to exhibit his skill in the drawing-room, and responded, with more or less success.

In recent years, medical scientists have devoted considerable attention to mesmerism, under the name of hypnotism. Success has attended the efforts of modern hypnotists just as it smiled on the labors of both the ignorant and learned peripateticsand drawing-room showmen of former times. Great results were promised. The old fad with the new name was to become a wondrous therapeutic agent. The hypnotizer was to eagle-eye the suffering victim, and cry "presto, pass"—pains were then to vanish, and balmy sleep was to gently steal over the weary invalid.

The subject was very thoroughly discussed at the last meeting of the British Medical Association, and good effects are likely to accrue therefrom There appeared to be a general concensus of opinion that hypnotism was a powerful agent when applied to a limited number of individuals. Dr. Gairdner, of Glasgow, was fully impressed with its powers at a drawing-room exhibition which he witnessed, but at the same time had a feeling that there was something "no canny" about it. Scotch shrewdness and common sense are not easily dissipated by the glare of scientific sensationalism. Dr. Norman Kerr acknowledged that a limited number were susceptible, but the after effect was a disturbed mental balance and nerve exhaustion

One of the speakers referred to the moral aspect of the question, and doubted if many of the members would allow their wives or daughters to be hypnotized.

We have no doubt that hypnotism, when effective, is likely to injure the subject mentally, morally, or physically, or in all ways combined. It frequently changes him into the condition of a peculiar cataleptic, who has given himself, body and soul, for the time being, into the hands of the hypnotizer. Its influence for good is so limited, and its powers for evil are so great, that we think it should not be countenanced in any shape or form.

We are pleased to know that the Birmingham discussion has fully awakened the British medical profession to the grave dangers associated with hypnotism; and one of the results likely to follow will be the introduction of a bill at the next session of the British Parliament, which will prevent, or at least restrict, the public exhibitions of hypnotic powers which have lately become so common.

Hospital Reports.

INJURY TO THE RIGHT SHOULDER RESULTING IN A STIFF JOINT—TREATMENT BY MANIPULATION—RECOVERY.

UNDER THE CARE OF A. PRIMROSE, M.B., C.M., EDIN., M.R.C.S. ENG., IN THE TORONTO GENERAL HOSPITAL.

M.H., æt. 51, laborer, admitted into the Toronto General Hospital on June 23rd, with the following history. Nine months ago, while engaged driving a team of horses he was thrown violently upon his shoulder. He suffered a good deal of pain at the time, and this persisted for a considerable time; he was, however, able to use the arm in a limited way for two or three days, although this caused him pain, and the amount of movement at the joint was somewhat restricted. One month after injury he consulted a doctor: liniments were used with temporary relief of the pain. For some months he continued the use of various liniments, and steamed the joint without acquiring any benefit. Six months after the injury he consulted another doctor, who told him the bone was diseased, and blistered the part freely. A third doctor was called in a short time afterwards, who stated that there had been a dislocation at the shoulder joint at the time of the injury; he treated the patient for six weeks but did him no good. He then came to the hospital. On admission, the shoulder presented a perfectly normal appearance; there was no swelling nor redness about the joint; there was no muscular wasting, and the bony prominences were in their normal relation to one another. The patient complained of no pain when at rest, but there was considerable pain on movement; he refers the pain more particularly to the region of the acromio-clavicular articulation. He states that occasionally he suffers from a dull aching pain over the biceps muscle, and shooting pains through the shoulder. Movement at the joint is very considerably restricted; there is little or no rotatory movement possible, the arm can be abducted from the side but chiefly by rotation of the scapula; the arm cannot be carried above the head; forward and backward movements are very limited. It is possible to place the finger tips of the disabled limb on the opposite shoulder, and, at the same time, to bring the arm down to the chest wall. There was no dislocation.

The patient's general health was good; there was no history of tubercular disease in the family, and the man has always been strong. The case was diagnosed as one in which stiffness of the joint had followed traumatism in consequence of the formation of adhesions. In all probability there had been some laceration of the soft parts at the time of the injury, the subsequent pain caused the patient to keep the joint at rest, and in consequence, during the reparative processes, adhesion formed within the joint.

Treatment: On July 4th chloroform was administered, the shoulder girdle was firmly held by an assistant to prevent rotation or other movements of the scapula. Movements were then conducted at the shoulder joint. On flexing at the elbow, and, using the forearm as a lever, rotating the arm outwards, a number of adhesions gave way with an audible tear; this was accomplished without undue force. The various movements of abduction, etc., were then systematically carried out, and the result was

that very free action indeed was obtained. The arm was laid across the chest and a bandage applied, and patient was sent to bed. He complained of considerable pain after the operation; evaporating lotions were applied, and the arm kept at rest for 48 hours. Passive movement was subsequently conducted, and after a few days the patient was encouraged to use his arm as freely as possible. During the following fortnight he carried heavy articles about the ward, and practised on a horizontal bar, lifting himself up and supporting his weight with his arms raised above his head.

He left the hospital three weeks after the operation. All pain has subsided, and the extent of movement at the joint was practically normal.

Clinical Notes.

REMOVAL OF THE INTERNAL SAPHENOUS VEIN FOR VARIX.

BY J. R. LOGAN, M.D., M.R.C.S. ENG., GRAND FORKS, NORTH DAKOTA.

The patient, a tall, heavy man, aged 34, received, about eleven years ago, a crush of the right leg in a sawmill: the tibia and fibula were broken about four inches above the ankle joint and the soft parts badly lacerated. In telling his own story, he states that 109 stitches were taken in the leg at that time. During convalescence from this injury, he noticed a small soft swelling on the inner side of the leg about four inches above the ankle, which his medical attendant pronounced an enlarged vein. From this time on, he says, that he has noticed a steady growth of the varicosity, until it has involved the whole internal saphenous vein to within a couple of inches of the saphenous opening. For the last eight years he has suffered from a succession of varicose ulcers, being laid up about three times a year on this account; for the past year he has been unable to work for a month without a recurrence. Palliative treatment has been of very little apparent benefit. I first admitted him to the county hospital last March, and in view of his history, comparative youth, and the failure of palliative treatment, advised the removal of the vein; he would not consent to this, and in about four weeks left the hospital with the ulcer healed. About the middle of July he returned with an ulcer larger than a silver dollar near the inner ankle, and begged to have the operation done. After a few days rest in bed, with disinfection of the leg and ulcer, I operated on July 18, 1890, as follows: — The right leg and thigh were shaved, washed with hot water and soap, and packed in a wet carbolic dressing for about four hours. Ether was then administered, and when on the the table the whole limb was thoroughly scrubbed with 1 in 2000 bichloride solution, and covered with towels wrung out of the same solution—only the immediate field of operation being exposed at any one time. A piece of rubber tubing was tied around the thigh high up, tightly enough to arrest venous circulation. The incision began about two inches below the saphenous opening, when the vein was found, and divided between two catgut ligatures. The incision was then extended downwards over the distended vein for six or eight inches, cutting through subcutaneous fat and superficial fascia; the vein, thus exposed in parts, was then laid bare by running a director around the vessel and here and there dividing the bands of fascia which bound it down. When a lateral branch was exposed it was divided between two catgut ligatures; in this way the operation was practically a bloodless one, and the main vein, being thus kept distended with blood, was more easily dealt with. Nineteen tributary branches were thus tied off in the removal of the whole vein, the majority being met with around the knee and in the leg. After dissecting out the first six or eight inches the wound was irrigated, covered with a hot bichloride towel, and the incision continued below in the same manner. By these steps about twenty-eight inches of dilated and tortuous vein were removed through a twenty-five inch incision, which reached nearly to the ankle joint, terminating just above the ulcer. The whole wound was then exposed, thoroughly irrigated, and sutured with interrupted catgut sutures at about three-quarter inch intervals; five small drainage tubes were inserted at places where the dissection seemed to have caused a tendency to formation of pockets under the skin. The incision was dusted with iodoform and dressed with sublimate gauze, and then very firmly and

evenly bandaged. The ulcer was then exposed, thoroughly cleaned and scraped, and thickly covered with iodoform. After forty-eight hours the wound was dressed and all drainage tubes removed. On the fifth day again dressed, and found healed throughout almost its whole extent. The ulcer was then dressed and found healed, except a small spot not larger than a five cent piece. Healing continued uninterruptedly, and patient was walking in three weeks. At this date he is working as second cook and waiter at the hospital, and is apparently perfectly cured

Remarks.—The varicose condition followed an injury to the vein and seemed to be directly caused by it. This, I think, may be found to be a more common cause of varicose veins than it has heretofore been considered. I believe the injury was the beginning of a hyperplasia, which condition gradually proceeded from the point of injury and slowly involved the whole vein. Mr. Pearce Gould has considered varicosities as an inherent growth of the vein, rather than as being due to the usually enumerated causes. It is possible also, as W. H. Bennett suggests in his late monograph, that a large proportion of varicosities originate in congenital defects of the venous apparatus and are in some patients distinctly hereditary, and that most of the so-called originating causes, such as local pressures, constipation, pressure of a long column of blood, etc., are in reality only causes of an increase of the disease or of certain symptoms connected with it, and that we must look for some other originating cause. As to treatment: In this case the removal of the whole disease seemed to be justified from the youth of the patient, 34 years, the fact that he had to work hard as a laboring man for his living, and the failure of palliative methods of treatment. From the history of the steady growth of the varicosis upwards from the point of injury, it seemed proper to endeavor to arrest the growth by removal of the diseased vein.

No other method of radical cure can compare with the *total* removal of the varicosis in point of safety or comfort to the patient, as with perfect antisepsis the wound heals quickly and painlessly, and concomitant ulcers are more quickly healed than by any other treatment. I believe that the day has come when all such painful and dangerous methods as the use of caustics, obliteration with pins, intra or extravenous injections, etc., should belong to the surgery of the past, and in all cases where the radical cure is determined on, the modern surgeon will remove the varix.

I would advocate more frequent resort to this operation, even in the slighter cases of varix, since I understand the pathology of the disease to be a hyperplastic growth of the vein; it may, and of en does continue, under palliative supporting treatment, even when such treatment is successful in preventing the usual sequelæ of ulceration, pain, etc.

Correspondence.

LODGE PRACTICE.

Editor of CANADIAN PRACTITIONER.

DEAR SIR,—I have watched with interest your articles on "Contract Practice." Your Queen City appears to be seriously affected with it. I think it would be well if you could hear from all the counties in the Province on this matter, so that the profession would know its prevalence, and the feeling existing in reference to it. With your permission I shall speak a few words for the county of Brant. If the other counties have done as much as our own to rise above the practice, you may well look to the country districts for a precedent. The matter has time and again been broached at our Provincial Association, but the time is too short for a discussion that would necessarily take more minutes than our meetings can spare, and hence it has never been definitely acted upon. I think it would facilitate matters very much were you to allow space in your journal for a thorough discussion. Our Association might then be ready at its next meeting to take a vote, without a prolonged debate. After a lengthy consideration of the question by the Brant County Medical Association, the following resolution was carried unanimously at a meeting held June 10th, 1878:—"That in the opinion of this Association contract practice, except in so far as it relates to government situations and charitable institutions, is not expedient in the interests either of the profession or the public." "It is there-

fore further resolved, that the members of this Association will not, hereafter, engage in such practice, except for such time as may be necessary to terminate any existing engagement." These resolutions were published in your journal and the *Lancet*. That some members of the Association were thought not to be above reproach appears from the following resolution of March 2nd, 1880: "That whereas it is believed that the resolutions of this Association regarding contract practice have not been fully carried out, the matter be taken up at the next regular meeting." There is nothing in the minutes after this until March 3rd, 1885, when the following motion was carried: "That the resolution of June 10th, 1878, relating to contract practice, be rescinded." This latter motion was the outcome of a belief that certain members were carrying on this lodge practice clandestinely, and that those who were not engaged in this practice would not undertake it under any circumstances, and that those who were would be relieved from the censure of the Association. In fact, it was considered that a Provincial resolution would have more effect on the erring or weaker ones. The matter, although it appears to have taken a retrograde movement, according to this resolution, has actually progressed, as will appear from the fact that members of our profession who were, at the time of passing the first resolution mentioned, actively engaged in lodge practice, would not now undertake it under any consideration, and from the fact that some of our benevolent lodges have done away with the contract doctor. Other lodges, I am led to believe, would do likewise, but for a clause in their charter compelling them to appoint a physician. I will now give a few reasons that I gave a deputation who waited on me to become a lodge doctor, when I first entered private practice. By appointing a physician as lodge doctor, many of the well-to-do are placed on a par with those who are not. Some of you are able to pay our regular fees, and those who are not, I will not ask them. I do not think whether a man belongs to a society or not when he asks for my assistance. If well-to-do, I expect my pay; if poor and cannot pay, I will help him. Those who are well-to-do pay no more fees than the poorest, and get their medical attendance at the same rate. Those members who do not wish to employ the lodge doctor are not allowed any reduction in their fees. This is a great injustice Again, it hampers the liberty of the patient in the choice of a physician. It appears rather degrading that the physician is selected simply because he is the lodge doctor. The physician should be selected from some higher motive. And, again, the practice interferes with medical harmony. Take *e.g.* the following case, which is not of infrequent occurrence: The husband of a family, who for trivial ailments consults the lodge doctor, is taken seriously ill, while under his care. Then he and the rest of the family wish their regular physician. Now, it is not a pleasant task for the latter to undertake. I feel that I have been benefited by the societies, although I have never attended one. There are families, the husbands of which I do not attend, which feel that they can pay me better, when the lodge doctor is paid so little. I feel for the lodge doctor. Again, I hear the complaint that many lodge members are very exacting with their physician, more so than is professionally required. But I was told by the deputation that it would help me into practice. Yes, I answered, and it will help me out of it. I have too much respect for those who are many years my senior in practice to take from them patients between whom the best of good feeling exists, by becoming a lodge doctor for a fee which cannot remunerate me for my services. I am willing to take my time and turn, assist my seniors, and get my patients from some higher motive. I am now twenty years a graduate, and never regret the stand which I took. In some of the States I am assured the benevolent societies have no lodge doctor, members being allowed perfect freedom in the choice of their physician. What could be better in a country where the State is watchful that none but qualified persons shall be allowed to practice? Yours truly,

W. BURT.

Paris, Sept. 2nd, 1890.

Pamphlets Received.

The Sewerage of Columbus, Ohio. Address of Col. G. E. Waring, Jr.

Dosimetry in Colorado, by J. E. MacNeill M.D., Denver, Colorado.

Reformation in the Practice of Medicine by the Dosimetric Method of Practice, by J. E. MacNeill, M.D.

An Analysis of Some of the Ocular Symptoms Observed in so-called General Paresis. By Charles A. Oliver, M.D., Philadelphia.

Recherches cliniques et therapeutiques sur l'Epilepsie, l'Hystérie, et l'Idiotie, par Bourneville, Sollier et Pilliet. Paris: Bureaux du Progres Médical, 14 Rue des L'armes.

Book Notices.

Essentials of Anatomy and Manual of Practical Dissection, together with the Anatomy of the Viscera.—By Charles B. Nancrede, M.D., Professor of Surgery and of Clinical Surgery in the University of Michigan, Ann Arbor, etc. Third edition, revised and enlarged. Philadelphia: W. B. Saunders, 1890.

This is a small book of 388 pages, illustrated by 30 lithographic plates in colors, and 180 wood-cuts. The matter in the text of the book is presented in the form of questions and answers. This method of writing books for students is now becoming very common, and we think the advantages are questionable. The subject of anatomy at all events cannot, in our estimation, be efficiently studied in this way. In the study of anatomy the student should be encouraged to examine for himself dissected parts, bones, etc., and should consult a text book giving a clear description of the part under examination; his work is hampered if he has to classify his knowledge of details under the heading of appropriate questions. This is, we consider, the chief objection to the text-book of Prof. Nancrede. The illustrations are excellent: the plates are taken from the works of Maclise, Savage, Nuhn, and Hirschfeld. The last edition of Gray's Anatomy has been chosen as the chief authority in compiling the work, the descriptive portions of the work are accurate, and as full as one would expect in a volume of its size. The work is not suitable for the dissecting room, as it treats of the different anatomical systems of the body separately, and does not give the dissections of regions; it cannot therefore be substituted for Ellis, Cunningham, or Heath. The book is neatly bound and printed, and the plates are beautifully executed—in fact the volume is well worth possessing for the plates alone.

Wood's Medical and Surgical Monographs.—Vol. VI.; number 3. June, 1890. Contents: Bronchial Asthma: Cause, Pathology, and Treatment. By John C. Thorowgood, M.D., F.R.C.P. Convulsive Seizures: By J. Hughlings Jackson, M.D., F.R.C.P. Surgical Treatment of Diseases of the Brain: By Ernest von Bergmann, Berlin. William Wood & Co.: New York, 1890.

This volume of Wood's well-known series is particularly attractive. Each article will be found of special interest, and is written by an eminent authority on the subject dealt with.

The paper by Dr. Thorowgood will be found very useful; the ætiology and pathology of asthma are fully inquired into, and many valuable suggestions are given for the treatment of bronchial asthma in its various manifestations. The essays of Dr. Hughlings Jackson and von Bergmann are of unusual interest.

Book Reviews.

In the May number of *Wood's Medical and Surgical Monographs* are to be found the following treatises: Insanity at the Puerperal, Climacteric, and Lactational Periods, by W. Bevan Lewis; Treatment of Diseases of Women by Massage, by Dr. Robert Ziegenspeck, Munich; Treatment of Internal Derangements of the Knee Joint by Operation, by Herbert W. Allingham, F.R.C.S.; The Idiopathic Enlargements of the Heart, by Dr. Oscar Frantzel, Berlin.

Wood's Library for July, 1890, contains: Stricture of the Rectum, by Chas. B. Kelsey, M.D.; Influence of Heredity on Alcoholism, by Dr. Paul Sollier; Rabies, by Louis Pasteur;

Colotomy, by Thomas Bryant, F.R.C.S.; Massage of the Abdomen, by Dr. Rubens Hirschberg.

Births, Marriages, and Deaths.

BIRTHS.

LOGAN—At Grand Forks, North Dakota, on September 1st, the wife of Dr. J. R. Logan, of a daughter.

MARRIAGES.

MCLACHLIN—VANCORTLANDT—On the 20th inst., at the residence of E. W. Strathy, Lachine, Claude McLachlin, of Arnprior, to Mabel, daughter of the late Ed Van Cortlandt, M.D., of Ottawa.

DEATHS.

O'NEIL—Dr. T. O'Neil, Trenton, died Sept. 9th, of consumption. He graduated at Queen's College two years ago.

COLLEGE OF

Physicians and Surgeons

OF ONTARIO.

Medical Council Fall Examinations

SEPTEMBER, 1890,

IN TORONTO AND KINGSTON.

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By Order

R. A. PYNE, Registrar,

College Physicians and Surgeons of Ontario, Toronto.

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Clinical teaching and laboratory work are especial features of the curriculum.

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THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

☞ Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, OCTOBER 1, 1890.

Original Communications.

ON THE LOCAL ADMINISTRATION OF BICHLORIDE OF MERCURY IN CERTAIN DISEASES OF THE FEMALE PELVIC ORGANS.

BY A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. ENGLAND.

Lecturer on Diseases of Women, in Bishop's College, Montreal.

Bichloride of mercury has been used for several centuries as an alterative and absorbfacient, more especially to promote the absorption of syphilitic exudations. The mode of administration was generally by the stomach, until a few years ago, when the hypodermic method was introduced. The results from this latter method prove that the areolar tissue under the skin readily admits the drug into the general system, and were it not for the inconvenience of making so many punctures, it would present many advantages over administration by the stomach. The rectum has still later come into prominence as an absorbing surface, and as such there is no doubt that it is even superior to the stomach. The vagina has also been known to be capable of absorbing certain substances, but its exact capabilities in this direction do not seem to have been accurately observed. In a dozen standard works on physiology and therapeutics, the fact that certain substances may be absorbed by the mucous membrane of the vagina is merely mentioned in only one or two of them. That medicaments may be introduced not only into the absorbents of the pelvis, but also through them into the general circulation, has been made evident to me in a great many cases in which I have employed atropine, morphine, iodine, and iodoform, with the results that patients either showed the constitutional effects of these drugs or could taste them in the mouth. In fact, I have found it quite common for patients, who were not aware that I had painted the vagina with Churchill's solution of iodine, to tell me at their next visit that they perceived a metallic taste in their mouths shortly afterwards. The same has occasionally been true of iodoform; while in every case of hopeless cancer of the uterus in which I have rendered the path towards the grave as pleasant as possible by the local application of morphine and atropine, they have produced all the general manifestations of each of these drugs.

There is one point, however, which may be raised in objection, and of which I do not feel certain as to the answer. Granted that the abraded mucous membrane of the vagina or cervix do absorb freely, is it also true that the same takes place when the membrane presents no solution of continuity? I am inclined to think that it does, although I have not had sufficient cases presenting the required condition of being free from abrasion in order to demonstrate this point. As far as bichloride of mercury is concerned, I am positive that it is no exception to the rule, in the case of an abraded mucous surface.

I have had a case in my own practice, and I have the record of many cases in the practice of others, in which severe toxic effects have followed the simple irrigation of the vagina with a more or less strong sublimate solution. In the case in which it has occurred in my own practice, sudden diarrhœa, collapse, and suppression of the urine, but ultimate recovery, followed the post-partum introduction of a pint of a one in a thousand solution—but, of course, in this case there were doubtless many abrasions of the mucous membrane. It is also true that in the majority of cases of pelvic infiltration, with or without exudation, the epidermis of the vagina and cervix is, to at least some extent, wanting.

I have now been employing the local administration of bichloride of mercury in doses of one-tenth of a grain every three or four days, on a boro-glyceride tampon, during the last two years, about five hundred times in about fifty cases of vaginitis, endometritis, salpingitis, ovaritis, and pelvic peritonitis, and I feel sure the duration of treatment, before relief has been obtained, has been very much less than was the case before I adopted this method. Exactly how much of my success is due to the bichloride alone, I am unable to say, for the simple reason that, at one time or another of the treatment, in every case, I employed other remedies and measures in addition to it. One of my reasons for attaching so much value to the bichloride of mercury employed in this way, is that nearly every one of the diseases above mentioned is due more or less directly to septic absorption, and that the more or less constant production of septic matter is necessary to keep up the disease.

The method in which I prepare these tampons is as follows: I make seventy of them at a time of different sizes, from the best absorbent cotton, which I then plunge into a pint of distilled water colored with aniline dye, and in which a seven grain bichloride tablet has been dissolved. If a pint is too much or too little, less or more water may be added, but I find that a pint can be taken up quite easily by seventy of these tampons. Each tampon will, therefore, contain one-tenth of a grain of bichloride. Care must be taken that too strong a dose is not employed, otherwise the discharge becomes irritating to the mucous membrane of the vulva. I employ these tampons in every case in which tampons are required, sometimes using as many as three or four of them, either dry or after soaking them as well, in either glycerine or ten per cent. boro-glyceride. Although I believe that this quantity is quite sufficient to have a very material effect upon the germs of putrefaction, as well as on gonococci, the dose is quite harmless, there not being at any time in the vagina more than an ounce of a one in ten thousand solution, or one-half an ounce of a one in five thousand. I have noticed in every case in which I have employed them that the unpleasant odor of the discharges of which the patient had previously complained, has been completely removed, which alone would be enough to make it well worth while employing them. Another advantage is that tampons so prepared may be left from four days to a week without decomposing, which is greatly to be desired in cases which cannot be seen by the attendant every two days. I rarely, if ever, use pessaries, as I find, especially in cases where there are adhesions, that these tampons are painless, never light up inflammation, and are very effective in keeping the uterus and ovaries in healthy position until the cause of the displacement has been removed by other means.

I have brought this matter before you rather with the object of calling your attention to it so that as many of you as think it desirable may try it in your practice, and either condemn or approve, as you are warranted by the results.

Selections.

CEREBRAL LOCALIZATION.

(An Abstract continued.)

The visual centres—The movements which can be excited on stimulation of the occipito-angular region have already been mentioned. Ferrier's hypothesis is that the movements of the head and eyes are the signs of the arousal of the subjected visual sensations, and due to the associated action of the frontal and subcortical oculo-motor centres. This has received confirmation from the experiments of Schafer on the latency periods of the ocular movements following excitation of the frontal and the occipito-temporal regions respectively. This would agree with the hypothesis that in the one case

the movements were reflex and in the other direct.

The fact that the ocular movements are still attainable on stimulation of the occipito-angular region, after complete removal of the frontal region, shows that they are not necessarily indicative of the association of those cortical centres, but may be due, if they are not always so, to the excitation of the oculo-motor centres of the corpora quadrigemina.

The occipito-angular region is the visual area of the cortex—complete destruction of this area in the one hemisphere causes permanent hemiopia to the opposite side by paralysis of the corresponding parts of both retinæ; while bilateral destruction causes complete and enduring blindness of both eyes. The sensibility of the eyeball is intact, and the ocular movements are absolutely unimpaired: There is no impairment of the sensibility or the motor power of the limbs. The other special senses are unaffected. If the destruction of the occipito-angular region is incomplete unilaterally or bilaterally, the resulting hemiopia in the one case is not enduring, nor is the blindness permanent in the other. Destruction of the angular gyrus, in combination with the occipital lobe, is the only lesion which causes a permanent result.

In a monkey in which Ferrier had completely destroyed both angular gyri, it was noted that for four days the animal was absolutely blind; then there were evidences of returning vision, and it was observed vision was better in every part of the periphery than in the centre. Objects held directly before the eyes and at a little distance were apparently not clearly seen and never laid hold of with precision; and the animal when examining any object always held it at full arm's length from its eyes. The phenomena observable in this animal were such as would be best explained by impairment or loss of central vision; for it is well known that when central vision is lost or impaired in man, objects are better seen at a distance than close at hand, and less distinctly when the eyes are immediately converged on them. It appears, therefore, that the symptoms resulting from bilateral destruction of the angular gyrus are best explained on the supposition that the angular gyri are more particularly related to the area of distinct vision, and accordingly with the macula lutea. The facts of disease in man render it necessary to assume that the region of the yellow spot is represented in each hemisphere, though more in that on the opposite side than on the same side, and the probability is that the area for clear vision is represented mainly in the angular gyrus of the opposite hemisphere. The results of Ferrier's experiments seem to show that the angular gyrus has relations with both eyes; the crossed action, however, is the only one which is clearly demonstrated in the lower animals.

A distinguishing test between tract and central hemiopia consists in determining whether a pencil of light thrown on the blind side of the retinæ induces contraction of the pupil or not. As the optic tract is the path of the fibres which excite pupilliary contraction through the oculo-motor centres, as well as those which excite visual sensation of the cortex, lesion of the optic tract will cause not only hemiopia, but also paralysis of the reflex reaction of the pupils to light; whereas lesion of the cortical centres will cause hemiopia, but leave intact the pupillary reaction.

There can be no question that in man and monkeys there is decussation of the optic tracts in the chiasma.

The angular gyri are more particularly the centres for clear vision, each mainly for the eye of the opposite side. Whether the other portions of the retinæ, upper, lower, outer, and inner, are specially represented in corresponding regions of the occipital lobe cannot be said as yet to have been established. It is doubtful whether there are on record any cases of strictly cortical lesions of the occipital lobe proper, accompanied by hemiopia, apart from direct or indirect implication of the optic radiations.

Irritative lesions of the angular gyrus occasionally give rise to optic illusions or flashes of light, followed by temporary amblyopia, while destructive lesions of the angular gyrus, more particularly in the left hemisphere, are generally associated with the special form of sensory aphasia termed word-blindness. Word-blindness is not necessarily accompanied by any noteworthy affection of visual sensation, though in some cases where the lesion of the occipito-angular region is more extensive, there may be

a greater or less degree of right hemiopia. On the other hand, right hemiopia, pure and simple, is not necessarily asociated with defects in visual ideation.

The fact that visual ideation, more particularly in reference to the association of written symbols with their meanings, is apt to suffer more readily than simple perception, appears to illustrate the laws of evolution and dissolution of the nerve centres which have been expounded by Hughlings Jackson; as evolution is from the most simple and most stable up to the most complex and least stable, so destructive processes annihilate first the higher and last of all the lower functional manifestations.

The visual centres in the lower vertebrates have been investigated. Hitzig first noticed the occurrence of blindness in the opposite eye from destruction of the occipital region in dogs. Though in dogs the visual area is mainly in relation with the opposite eye it is also in relation with the outer quadrant of the same eye; hence destruction of the visual centre in one hemisphere paralyses the inner three-fourths of the opposite retina and the outer fourth of the retina on the same side. But the facts recorded indicate that, for a short time at least, after the destruction of the middle portion of the second cerebral convolution, there is blindness in the opposite eye. It is likely that we have the same relations here as exist in monkeys, and that, for a time at least, after complete extirpation of the visual sphere, there is total blindness in the opposite eye. This is confirmed by the experiments of Bechterew, recently published. Bechterew finds that in dogs and cats there are two regions in the cortex related to vision; the one in the occipito-parietal region, in relation with the corresponding halves of both retinæ; the other, more especially in the parietal region, in relation with the opposite eye alone. Recent researches indicate that there is only partial decussation in the chiasma of the cat, dog and also in the rabbit.

The exact limits of the visual sphere in dogs are still the subject of some difference of opinion, but all experiments agree in including in this area the posterior half of the second external convolution. This is the convolution which in its electrical reactions corresponds with the angular gyrus and occipital lobe in monkeys.

In rabbits the visual area would, according to the homology of the electrical reactions, occupy the occipito-parietal region of the hemisphere. It bas been supposed that in this animal there is complete decussation of the optic tracts in the chiasma, but later experiments lead one to conclude that a small fascicle of uncrossed, or direct, fibres exist also in the optic tract of this animal. In the mouse and guinea-pig, however, the decussation is a complete one. In pigeons, and in birds in general, the region which in its electrical reactions is homologous with the visual centre of the higher animals occupies the parieto-posterior aspect of the hemisphere, where it forms a thick lamina over the corpus striatum. It is usually stated that in pigeons a complete decussation of the optic tracts occurs in the chiasma, but some doubts have been expressed on this point.

It seemed to Ferrier that if any bird can possess binocular vision, it should be the owl, whose eyes are placed almost in the same plane. From experiments he concluded that no doubt can be entertained as to the binocular relations of each cerebral hemisphere in the owl.

Though the monkey rendered blind by total extirpation of its visual centres acquires the power of avoiding obstacles when left amidst its usual surroundings, yet this appears to be due rather to a sharpening of its other faculties, or more attentive appreciation of the impressions made on these by the objects with which it is surrounded, than to visual sensation. The question is, however, one which will bear further investigation; for if retinal impressions are coordinated with apparently purposive actions in the subordinate centres of the lower vertebrates such as fishes, reptiles and birds, there is at least the possibility that similar reactions may be discoverable in the higher animals, even though in a much less degree. It is certain, however, that the visual area of the cortex is not a mere functionally differentiated region capable of replacing, or of being replaced by, other cortical regions, inasmuch, as destruction of the visual centres leads to atrophy in primary optic centres, optic tracts, and optic nerves; and conversely, destruction of the optic radiations leads to atrophy strictly confined to the regions included within the visual zone. The differentiation of an area exclusively—so far at least

as can be judged from clinical and experimental results—would strongly favor the hypothesis that other sensory faculties are also separately localized in definite cortical regions.

ON THE TREATMENT OF RUPTURE OF THE UTERUS.

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(Read before the Obstetrical Society of Edinburgh, 14th May, '90.)

My personal experience of this disaster is based on five cases, all of whom have died. In the second case I met with I drained, but without success. In the third and fourth the patients became moribund shortly after the occurrence of the rupture; while in the fifth I did abdominal section and Prevôt's operation. Though this last case was also fatal, it presents points of interest; and as the experience of other operators has been better than my own, I have deemed it advisable to bring the subject before you to-night, so as to draw attention to the treatment of an accident too often regarded in this country as almost unavoidably fatal.

My fifth case is as follows:—

Report by Drs. Fitzgerald and Mellville. Mrs. C., æt. 41 years, residing at 3 Burns Land, Greenside Row, x.-para. Her previous children were born living and healthy. The labors were all slow and lingering, except the ninth, in which the membranes broke unexpectedly at a meal, the child being born in an hour and a half. She menstruated last in the beginning of July, and had not been very strong during the last few months. She had influenza at the New Year, and shivered for two days; she had also a cough and a pain in her left side, which appears to have been due to pleurisy.

Present Pregnancy. — Membranes ruptured when she was sitting at her dinner at two o'clock. There were no previous pains. The student arrived at quarter to three o'clock, and found the patient in bed. Her face was pale and emaciated. On palpation of abdomen, walls were tense and resistant. The uterus was felt firm and hard, but no contractions were made out. The position of the head could not be ascertained. On auscultation, the fœtal heart sounds could not be heard. On vaginal examination the vagina was roomy and moist. The os uteri was not dilated, and barely admitted the tip of the finger; no presenting part could be felt. She had had no pains up till now, except now and then very slight lingering pains at the front or the lower part of the abdomen. No pains whatever at the back. The student left at 3.20 p.m., with instruction to be sent for if the pains came on stronger. He returned at 6 p. m., and found the os had dilated considerably, and would now admit of three fingers. A smooth fleshy mass could be felt presenting, but could not be accurately diagnosed. Fœtal heart sounds could not be made out. The pains were still of the same lingering character, and all at front of abdomen. They were a little stronger than previously, but still slight in nature. She was ordered a hot douche at 6.30 p.m., and another at 7.15 p.m. At 7.40 p.m., the presentation was diagnosed to be a shoulder, and assistance was sent for to the Maternity Hospital.

The house-surgeon arrived at 8.30 p.m. The uterus was found in a state of tonic contraction. No fœtal heart sounds could be made out. Chloroform was administered, and on vaginal examination the presentation was found to be the right shoulder. The child lay in the dorso-anterior, left cephalo-iliac position. The question of turning was now discussed, and it was decided not to do so on account of the tonic contraction of the uterus and the firm impaction of the shoulder, and Dr. Hart was sent for. During the interval before the arrival of Dr. Berry Hart, patient lay quietly. There was no visible sign of any strong pain, and she exhibited no signs of collapse or shock.

On Dr. Berry Hart's arrival at 10 p.m. the administration of chloroform was at once resumed, and immediately on his palpating the uterus he diagnosed rupture. The fœtus could be palpated out high up in the abdomen, and the empty uterus felt in the hypogastric region. He passed his hand through the rent, and seizing the leg of the child attempted to draw it back through the rupture, but was compelled to desist, owing to the bowel coming with it.

Dr. Hart then proceeded to perform abdominal section; and cutting through the abdominal walls in the middle line, opened the

peritoneal cavity and lifted out the child; he also removed the placenta which had been extruded from the uterus, a small portion only remaining attached to it. The uterus was then lifted forwards out of the abdominal cavity, and an attempt made to ligature it by a piece of elastic tubing. This tubing broke, and nothing else being available, a strong piece of twine was passed round the lower uterine segment and fastened securely. (The twine was afterwards replaced by a piece of the tubing generally used for ligature of uterus in Porro's operation.) The uterus was now amputated above the lower uterine segment. Some bleeding vessels were ligatured, and the abdominal cavity thoroughly douched out with hot water. There being only one sponge available, strips of clean cloth were used in addition. The ligature clamped the stump of the uterus a little above the lower limit of the rupture in the uterine wall; but a piece of the peritoneum forming the fold of Douglas was pulled in under the loop of the ligature, and so cut off the peritoneal cavity from the vagina. The incision in the abdominal wall was closed by silk sutures, which were passed deeply, so as to include skin, muscle, and peritoneum; five or six sutures were used. The stump of the uterus was brought through the external incision, and secured in that position by transfixing it with knitting needles. The wound was dressed with iodoform gauze, and a binder applied over all. The antiseptic used was corrosive sublimate. During the whole course of the operation the patient had been receiving frequent subcutaneous injections of ether; brandy was also given.

The operation was concluded at a quarter past eleven; and the pulse being barely palpable and the patient collapsed, one of the house-surgeons left for the transfusion apparatus. In the meantime brandy was given by the mouth, and also digitalis in the form of the tincture. On the arrival of the transfusion apparatus, 27 oz. of sterilized salt solution, of strength of ʒj. to the pint of boiled water was injected into the infra-clavicular subcutaneous tissue by means of syphon action. (Temperature of transfused fluid, 100° F.) This caused no appreciable improvement in the pulse, and the patient sank rapidly, the pulse being palpable at the radial artery ten minutes before death, which occurred at twenty minutes to 1 a.m.

The child was a male and still-born; the skin was peeling off in some places. The skin over right shoulder was much discolored by a well-marked caput succedaneum on it. Placenta was normal.

This gives the account of the case from the spectator's point of views. How the case struck me is briefly as follows:—When I was summoned to the patient I took with me Braun's blunt hook for decapitation, not anticipating anything more serious. When narcosis was completed, however, and inspection was made of the bared abdominal surface, it was evident that the flattening of the recti as the patient strained pointed to something abnormal. On palpation, therefore, I was not surprised to be able to make out the fœtus distinctly through the abdominal wall, and feel the body of the uterus apart from it and below the umbilicus. I accordingly diagnosed uterine rupture, and passed my hand into the vagina to ascertain its extent. I found it to be a huge one at the upper limit of the lower uterine segment posteriorly, easily admitting the entire hand. Blood poured through the rent, and as I believed the case to be, if not hopeless, a very bad one, I thought it best to attempt delivery of the child and placenta through the rent, and then to see what next could be done in the way of treating the rupture by the iodoform gauze tampon, as has been recently practised so successfully by Leopold and others. I accordingly seized the foot of the child and drew it down, but speedily desisted, as I found that with it the small intestines were descending thorough the rent. No course was therefore left to me but the performance of abdominal section, and I did this all the more readily as I saw I could deal with the rent then either by supravaginal amputation of the uterus or otherwise, as I thought fit. One difficulty was the armamentarium, as when mustered it only amounted to one knife, india-rubber tubing, needles and thread, one pair of Péan forceps, and one sponge, which an obliging but tipsy female neighbor sacrificed for the emergency. The house was a hovel, and the light scanty, but everything depended on speed, and sending to hospital would have involved nearly an hour's delay. When the abdomen was opened venous blood poured out, so that I at once seized the uterus and passed tubing

round it. Part of the rent was still below the level of the tubing, but I was able to pull loose peritoneum from the pouch of Douglas below the constricting tube, and thus shut off the vaginal from the peritoneal cavity. I then cut off the uterus above the ligature (supravaginal operation—Prevôt's operation), made a careful peritoneal toilette, and closed the wound as already described. During the peritoneal toilette large clots were removed from the flanks. From what has been said, it will be seen that abdominal section was imperative here to extract the child and placenta. The method of treating the rent adopted seemed to me to be the best for this special case; but I wish to point out that various methods may be employed, and it requires a statistical record of all cases to help us to settle which gives the mother the best chance. I therefore now wish to make a few remarks on the treatment of uterine rupture in general. In cases of rupture where the presenting part is still in the genital tract, it is evident we must deliver it in such a way as to avoid upward tension on the uterus, and therefore craniotomy or decapitation as necessary should be quickly employed. If the rent is not extensive, local irrigation with a dilute corrosive lotion, drainage, and abdominal pressure, or tamponnade of the uterus, vagina, and rent, with iodoform gauze should be performed; when the rent is more extensive, the edges should be approximated with tenacula while the tampon is being applied.

With an extensive tear and escape of child and placenta, or any one of them, into the cavity, laparotomy is imperative for extraction and peritoneal toilette. Extensive tear means bleeding into the peritoneum, and great risk of ultimate septicæmia if the blood be not removed. The treatment of the extensive rent is the next question. Suturing alone is ineffective, takes long, and has not been followed by good results. It is in such that our choice lies between Prevôt's amputation or careful tamponing vaginally and peritoneally with iodoform gauze. Recently Coe has had a successful case where he amputated the uterus and sutured the right utero-sacral fold. In sixteen cases of this amputation five recovered. Leopold, however, has recently recorded a case where the rent involved three-fourths of the lower uterine segment, and where the uterus was only attached by the left broad ligament. In this case laparotomy was performed, the pouch of Douglas plugged with a long strip of iodoform gauze, which was applied to the edges of the tear, brought round between the right side of the uterus and pelvic wall, into the vesico-uterine pouch, and its ends out at the abdominal wound. The uterine cavity and vagina were plugged with another strip. These were left in for fifteen days, and the patient made an uninterrupted recovery. In seven cases treated thus, Leopold saved two. From this, I think we should all endeavor to give such cases the chance that operative treatment holds out. Many of them are hopeless, but even the most skilled prognosis is sometimes at fault, and it is not the duty of any man in such emergencies to fold his hands and say the case is hopeless, the woman must be left to die.—*Edinburgh Medical Journal.*

THE TREATMENT OF CYSTITIS IN WOMEN.—Dr. T. M. Madden presented the following note at the recent International Medical Congress: Of all the diseases which come before us in gynæcological practice there is none more frequently met with, more distressing in its effects, or more intractable to the means generally relied on for its relief, than cystitis in women. I therefore desire to bring under the notice of the International Medical Congress a method of treatment which I have found, by clinical experience, to be generally successful in the rapid curative treatment of this condition. The measures most commonly employed in such cases are merely palliative, and may relieve, but *per se* can never cure, well established cystitis in women. Nor am I aware of any method by which that can be accomplished save by giving the bladder absolute physicological rest. For this purpose, Dr. Emmet's operation—*i.e.*, the establishment of an artificial vesico-vaginal fistula—may be successfully employed in some instances, but the practical objections to it are so great and obvious that for several years past I have abandoned this procedure in favor of an other which I have found more generally effectual and quite free from the disadvantages of the operation referred to. The plan which I have now employed in a very large number of cases

of cystitis in the gynæcological wards of the Mater Misericordiæ Hospital, Dublin, consists firstly in the full dilatation of the urethral canal with the instrument exhibited, so as to paralyze the contractility of the sphincter vesicæ, and thus produce a temporary incontinence of urine; and, secondly, in the direct application through the same instrument of glycerin of carbolic acid to the diseased endovesical mucous membrane. I may add that any pain thus caused may be prevented by the previous topical application of a solution of cocaine, and that the procedure recommended seldom requires to be repeated more than once or twice at intervals of a week or ten days; and, combined with the internal use of boric acid, raely fails to effect a cure in any ordinary case of cystitis.—*New York Med. Jour.*

"TWIN PREGNANCY — HYDRAMNIOS TAPPING—CURE." PHOCAS, LILLE.—*Annales de Gynécologie, et d'Obstétrique*, May, 1890.

Hydramnios is said to be a rare affection, and its diagnosis is often embarrassing. The symptoms of pregnancy may be masked by the development of the amniotic liquid, and the case present all the characters of a monocystic tumor of the ovary. Incidental reference is made to a case under the care of Tillaux, in which the only sign which made exact diagnosis possible was the slight rhythmical contractions of the uterus. The author's case was that of a woman who had hitherto been always healthy. She had gone through three normal labors, the last about ten months before she came under the care of Phocas. It was eight months since she menstruated, and she believed herself to be pregnant, the movements of the child having been felt about four months after the arrest of menstruation. When everything appeared to be normal, the woman's abdomen suddenly began to enlarge rapidly. Her legs began to swell, and she experienced difficulty in breathing. When Phocas saw her, about three weeks after the first symptoms were observed, he found her emaciated and pale, with drawn features. Her respiration was embarrassed, and the legs were swollen. The abdomen was enormously distended, and apparently more so to the right than to the left. The skin was stretched, and its venation marked. The distance between pubes and umbilicus was greater than between umbilicus and xiphoid cartilage. The tumor extended to behind the lower end of the sternum, and its superior boundary could not be mapped out because of the tenseness of the skin. The tumor was of uniform consistence, it was slightly depressible, and no fœtal parts could be made out. Percussion elicited a dull note everywhere except just below the xiphoid cartilage and in the flanks, and these limits persisted after changing the patient's position; nothing was learned by auscultation, no fœtal movement, no souffle; the os was partially dilated, and movements of the vaginal portion appeared to be conveyed to some extent to the tumor. The diagnosis hesitated between simple cyst of the ovary and hydramnios, with a leaning towards the former, in spite of the signs of pregnancy enumerated. It was resolved to tap. While the fluid was being drawn off, a distinct intermittent hardening was felt in the tumor, and this hardening coincided with an arrest of the flow through the trocar. "The uterus alone could be the seat of such contractions; my trocar was in the womb. I evacuated about four litres of the fluid, and let the rest remain. The patient was greatly relieved. So much was her condition ameliorated that I had all the trouble in the world to make her stay in bed for three days." Five weeks later the patient was delivered of twins—one living, and one that had been dead for some time. Among his other reflections on the case, Phocas is disposed to conclude that tapping is the best treatment for hydramnios.

"EXPERIMENT WITH A SUBSTITUTE FOR THE INDUCTION OF PREMATURE LABOR." PROCHOWNICK, HAMBURG.—*Centralblatt für Gynakologie*, No. 33, 1889.

Considering the danger to the mother involved still in the methods of bringing on labor, and the uncertain prospects both as regards the life and the health of the child, Prochownick resolved to try an experiment by dieting in a suitable case, about which he was consulted in 1887. The woman had been confined already four times—once with perforation, once with turning, and twice by induction of labor prematurely. The children had all died.

She expected to be confined for the fifth time between the 18th and the 22nd of September, 1887. She was put upon special diet on the 1st of August. She was confined on the 20th of September, The child, a female, weighed 2,350 grammes, and was 50½ cm. long. It had all the characters of a mature child, except that it was very lean. It was fed by bottle, and it developed like a mature child, increasing in weight 250–280 grammes per week. The child is still alive and healthy.

Two other cases of more recent occurrence are also detailed. The first of these was the wife of an operative. She was delivered for the first time, in 1875, by cephalotripsy, after futile efforts with the forceps. In 1878 she was again delivered by turning and extraction. The child, which had been in a transverse position, lived only a few hours. In 1884, induction of premature labor, child surviving five weeks. Again expected confinement in first week of January, 1889. Diet very strictly adhered to from the 22nd November preceding. The child was born without obstetric interference. It presented all the signs of maturity, but in proportion to its length it was very thin and devoid of fat. It thrived surprisingly well (*erstaunlich*), and in six weeks weighed 4,000 grammes, at birth 2,800.

The third case gives a somewhat similar history. The child was 52 cm. long at birth, but was extremely thin (*fast durr*).

The principal effect of the regulated diet upon the fœtus was found to be absence of fat. The cranial bones yielded in a remarkable manner.

The diet was as follows:—In the morning, a small cup of coffee and about an ounce of biscuit; in the middle of the day, any kind of flesh meat, eggs and fish, with a small quantity of sauce, some green vegetables, and fat, suitably prepared, salad, cheese. In the evening the same as mid-day, with the addition of two ounces of bread, with butter according to taste of patient. Each patient was allowed half-a-pint or more of red or Moselle wine per day. Water, soup, potatoes, puddings, sugar, and beer, were absolutely forbidden.

"A CONTRIBUTION TO PROCHOWNICK'S SUBSTITUTE FOR INDUCTION OF PREMATURE LABOR." SWIECICKI, POSEN.—*Wiener medizinische Blatter*, May 29th, 1890.

Some reference is made to papers in which the danger of premature labor, especially to the child, is brought out. In Wyder's collected cases, the mortality of the children was 45.3 per cent. and of the mothers 5.3 per cent. So unsatisfactory are the results that some, among whom is Strauch, of Moscow, recommend Cæsarean section in preference to induction of labor. Swiecicki has tried Prochownick's plan and gives a report of four cases, which are somewhat similar in their details. The first was that of a woman of 32, a III. para. Her first labor was completed by the forceps, child still-born. The second ended with craniotomy. In the last eight weeks of her third pregnancy she submitted to Prochownick's dietary, and she gave birth to a living child. The child was very lean, with wrinkled skin, and very movable cranial bones, but it thrives very well.

In all the four cases the results were considered satisfactory, and on the basis of these results the opinion is expressed that in the medium degrees of pelvic deformity the dietetic method promises to be useful. The conservative Cæsarean section should be reserved for the more extreme degrees of pelvic deformity. —*W. J. Sinclair in Med. Chronicle.*

A NEW AND RAPID TEST OF SUGAR.—At a meeting of the Austrian Surgical Society last week, Professor Nothnagel showed a handy test of sugar, which had been forwarded to him by Dr. Becker, of Cairo. It is simply a visiting card saturated with a solution of potash, over part of which is drawn a covering of the sulphate of copper, and the urine applied. The card is then laid on the globe of a lamp, when the saccharine urine will color the card brown, and this color will be the deeper the greater the amount of sugar.—*British and Colonial Druggist.*

VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.—The President, Dr. Parker, at the recent meeting of the Academy of Medicine, Richmond, Va., reported having used in a case of puerperal convulsions, occuring two or three weeks before the expected time of labor (besides the usual plan of venesection and chloroform), tincture of veratrum viride, administering

fourteen drops early, and afterward five drops every two hours. Dr. Hugh M. Taylor, in consultation, had recommended enemata of bromide of potasium and hydrate of chloral in large doses. This was successful in relieving, but labor commenced two or three days afterward, and under chloroform the patient gave birth to a live child of eight months' gestation, large but feeble. The speaker had great faith in veratrum viride for the relief of convulsions. Mr. Albert Sneed had recommended it in ten-drop doses every two hours.—*N. Y. Med. Jour.*

THE
Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, OCTOBER 1, 1890.

OUR MEDICAL COLLEGES.

The work for the session of 1890-91 is about to commence in our medical colleges. We think there can be no doubt that the value of the work done in the schools is increasing from year to year. If we look back a few years, we will find that the improvement is marked. Great advances have been made in the practical character of the teaching. The students are required to spend more time in the laboratories, the dissecting rooms, and in the hospitals. We are commencing to realize the fact that mere didactic teaching is not sufficient for the wants of our students, and that such instruction, excellent though it may be in its way, must be supplemented by practical work.

The Ontario Medical Council has shown its appreciation of the condition of things by demanding a large proportion of laboratory and bedside teaching. It is far in advance of the average requirements of the United States in insisting on attendance on four full sessions of six months, and one summer session of three months. Many of the American States consider that they are doing well in making an attendance on their full courses of six months compulsory. When we consider that a large proportion of the medical institutions of the United States were accepting a two years' course, with an additional year in the office of a regular practitioner, we must acknowledge that this is a step in advance. While we realize the importance of this new departure, we cannot help feeling that the condition of things medical in the United States of America is very unsatisfactory. In a large proportion of cases there is little or no preliminary education required, and the courses given are very superficial.

Toronto has become a great educational centre. We recognize this fact in connection with medicine quite as much as in other departments. We have three medical colleges, two male and one female, that are doing excellent work. They are increasing in efficiency from year to year. Their equipments are well up to the times. The energy and ability of the several faculties are well known. There is no disposition to stand still; on the other hand, the general desire is to advance. The facilities placed at the disposal of the students are vastly superior to those in times past. There is, however, still room for improvement. We are glad that our teachers fully appreciate this fact. Many of them have carefully studied the methods employed in the best educational institutions of the old world, and are filled with a laudable ambition to give courses fully equal to the best. We are inclined to think that they will succeed.

At the present time appearances indicate a large attendance at all our schools during the coming session. We cannot view the prospect with unmixed gratification. The profession is now sadly over-crowded. What will become of the vast army of new graduates, is a problem we will not attempt to solve. We can scarcely exclude the new aspirants for medical fame. We have no right to try to shut them out, but we certainly ought to make the standard sufficiently high to close the doors against the ignorant and incompetent. We believe that this is being done, and we rejoice at the fact. With these facts in view, we have to congratulate our Canadian medical colleges on their success; and we desire to express the hope that they will each and all endeavor to raise the standard, by their teaching, in all respects.

THE JOHNS HOPKINS HOSPITAL.

Every physician should visit the Johns Hopkins Hospital of Baltimore. Its history is fairly well known, but its wonderful facilities cannot be fully appreciated until one has made a careful inspection of the institution. The trustees received about six millions of dollars, three to be expended on the hospital, and three on the university. One of the conditions is that the principal must not be touched, but only the interest. About two millions have been expended on the hospital up to the present time. There are four professors: Dr. Osler in medicine; Dr. Welch in pathology, including bacteriology; Dr. Halsted in surgery; and Dr. Kelly in gynæcology. There are qualified assistants in connection with each of these departments; and, altogether, the combined staff have charge of all the in and out-door patients.

The dispensary for out-patients is all that could be desired, and the numbers that attend it daily are large. The courses hitherto given are intended solely for graduates, and in all departments there is an immense amount of original investigation continuously going on.

We heard a good deal some time ago about certain losses connected with the investments. These losses were confined to the university, and did cause a certain amount of embarrassment for a time. During a recent visit to the university, we were glad to hear that any anxiety from such a source is entirely removed. A large sum of money was invested in certain railway bonds which, for a time, yielded no revenue. This was a serious matter for an institution which depended entirely upon its revenue exclusive of capital. The trustees showed great wisdom during the temporary loss of income, and simply delayed certain contemplated expenditures. While the cloud was passing over them, they had the good fortune to receive gifts amounting to half a million dollars, which added a silver lining so effectual that they were far removed from despair. The railway bonds were recently sold at a small premium, so that up to the present not a dollar of the principal has been lost. Johns Hopkins stands to-day without the shadow of a cloud hovering over it. The donor and trustees have shown a marvellous sagacity. The hospital is in many respects unique—nothing like it, in all respects, exists in the world. Its laboratories cannot, with our present light, be excelled. Its staff of physicians and teachers is composed of men—young, able, active, and energetic. It is doing a grand and noble work. As a post-graduate university, it stands almost without a rival; and, as far as we can see, is likely to remain so for a long time to come.

THE PROTESTANT HOSPITAL FOR INSANE IN MONTREAL.

We learn from the *Montreal Medical Journal* that this Hospital has been formally opened, and that thirty persons were admitted up to the end of August. It will be remembered that Dr. Burgess, so well and so favorably known in Ontario, was appointed superintendent. He is now in charge of the institution. The Montreal journal expresses the hope that "in a year or so it will rank among the foremost of our American asylums, for the beauty of its surroundings and the good results accomplished."

Meeting of Medical Societies.

CANADIAN MEDICAL ASSOCIATION.

The meeting of the Canadian Medical Association was held at Toronto, on the 9th, 10th, and 11th September. On Tuesday, September 9th, at 10:30 a.m., Dr. James Ross, of Toronto, President of the Association, took the chair, and called the meeting to order. The minutes of the last meeting, held at Banff, were read, and after other routine business, the meeting adjourned.

AFTERNOON SESSION.

The President read his address. He referred briefly to the past history of the Society, and made special allusion to the success of the meeting held at Banff last summer. He then reviewed the history of medicine, noting many of the advances which have been made in medical science from the time of the discovery of the circulation of the blood by Harvey, up to the present time. The President then discussed the subject of Lodge Practice, condemning it, and stating that a doctor appointed to any lodge or company should be paid a fair fee for all services rendered, and that each visit should be charged as in

ordinary practice; the present system is pernicious, and should be entirely stamped out. The one portal system of admitting into the practice of the profession in Canada was advocated; a common standard of proficiency should be demanded by all the provinces of the Dominion, and thus, a man qualified to practice in any one of the provinces, would be free to settle anywhere in Canada; if this end were attained, then we would be in a position to solicit reciprocity with Britain, and our graduates might be entitled to practice there, or anywhere in her Majesty's dominions.

Hon. G. W. Ross, Minister of Education, welcomed the visiting members of the Association to our city, and was glad to be able to place the hall in which the meetings were held at the disposal of the Association.

Dr. Prevost, of Ottawa, then delivered the

ADDRESS IN MEDICINE.

He reviewed the recent advances which have been made in medical science in various departments, more particularly in bacteriology. We can now study pathogeny, the origin of disease. We know that infection is due to the agency of living organisms. To Pasteur is due the development of the study of bacteriology; he taught us that fermentation depends on the presence of germs and that certain pathological phenomena are due to germs. These organisms we can study, cultivate, tame (*i.e.*, "attenuation"), and we can inoculate animals. The attenuation of virus is one of the greatest advances of the century. The question of the possibility of spontaneous generation has been studied in order to discover the origin of germs. Pasteur has successfully demonstrated that germs are diffused in air, and await merely favorable circumstances to develop. What prevents their development in living tissue? Immunity consists in the integrity of the organism attacked. The cutaneous or mucous surface acts as a defence, but introduce the germs through the surface and there follows congestion of the tissues invaded; the white blood corpuscles then take up the microbes and destroy them. Not only do the blood-cells, but cells in various organs of the body, possess this power of destroying microbes —phagocytosis, as the process is called. Shreds of a septic ligature even may be invaded by leucocytes and rendered harmless by their power of destroying the germs. We find that germs exist in the alimentary canal, and there live as parasites, but we escape poison because the organism is always fighting them; they are excreted by the kidneys, many are destroyed in the liver, and oxidation completes the process. Surgery was first to profit by the promulgation of the germ theory, as evidenced by the introduction of antiseptics by Lister and the subsequent advances in various branches of surgical practice, especially in joint-surgery. In medicine we find that bacteriological investigation has, in many cases, cleared up the etiology of disease; contagion is now understood, and preventive treatment has saved many lives. We find that typhoid contagion can be carried in water; pneumonia is infective, and therefore may be epidemic in character. Diphtheria is now known to be at first a purely local disease, and should at the start be attacked locally. The part played by micro-organisms has been demonstrated in such diseases as tuberculosis, leprosy, osteomyelitis, gonorrhœa, etc.

In the future we must carry on our investigations with the view of discovering the agents capable of combating particular germs; we already employ specific remedies for certain diseases, *e.g.*, mercury in syphilis, quinine in malaria, salicylic acid in rheumatism; and the success of the specific treatment is, in all probability, due to the effect of the agent in destroying the virus. We learn also from our studies that the soil must be rendered inert, and this leads us to investigate the hygienic surroundings of the individual.

Sir James Grant complimented Dr. Prevost on the interesting paper he had read. The Association then divided into sections.

THE SURGICAL SECTION.

Dr. Rogers, Montreal, President; Dr. Cowan, Secretary.

Sir James Grant read a paper on

PERI-URETHRAL CELLULITIS.

Two varieties recognized, one of which occurs in isolated patches of small size, about the penile portion of the urethra; and a second, forming a continuous mass between the layers of the triangular ligament behind the bulb.

The case was noted of a man aged forty, who suffered from extravasation of urine, in Feb., 1879; he had had a stricture for some years, the sequel to a gonorrhœa; the symptoms were urgent. Free incisions were made in the perineum, and linseed poultices applied, with great relief to the patient; it was found impossible to pass a catheter. A large portion of the integument of the scrotum sloughed. An opening three-quarters of an inch in length into the membranous portion of the urethra was the result, and urine flowed freely through the perineal fistula. The system was well supported by liberal diet and tonics. The sloughs gradually separated, and were replaced by granulation tissue. The question was, how best to close the fistulous opening; the poultices were continued until the granulation tissue was sufficient to cover the opening, and hide it from view. A number seven elastic catheter was passed into the urethra, entered slowly through the pouting granulations, and almost unexpectedly reached the bladder, the flow of urine through the instrument being quite free; it was retained in situ, and no urine escaped through the fistulous opening. The surface of the granulations was several times brushed over with mild solution of nitrate of silver. At the end of the third day the catheter was removed, and the urine subsequently flowed only through the natural channel. Healing rapidly occurred in the perineum, and in three months the patient resumed his work. The case was cited to demonstrate the marvellous reparative power of granulation tissue, even under the most adverse circumstances.

Dr. Shepherd would have employed different treatment in such a case; he would have performed perineal section at the time to prevent further extravasation. Further, he did not think that three days was sufficient time for healing to take place in an old standing fistula; a recent case, however, might have healed immediately. He considered Dr. Grant very fortunate in the result he obtained.

Dr. J. F. W. Ross then read a paper entitled

THE FAILURE OF THE REMOVAL OF THE OVARIES AND TUBES TO RELIEVE SYMPTOMS.

(This paper will be published in a subsequent issue of the CANADIAN PRACTITIONER.)

Dr. Halford Walker objected to the term "castration in women," and preferred speaking of the "removal of the uterine appendages."

Dr. Shepherd thought that patients are frequently lead to submit to operation without being informed of the serious nature of the procedure.

Dr. Ross replied.

Dr. Shepherd, of Montreal, then read a paper on a case of

CHOLECYSTOTOMY.

After giving a short account of the history of the operation, and the difficulties attending it, especially when the gall-bladder was small and shrunken or altered by inflammatory action, he related a case in which the operation had been successfully performed. The patient was a lady, aged fifty-one, who had been suffering from dyspeptic symptoms, with pain in the epigastrium for a year, and had been losing flesh. Some six weeks before she consulted Dr. Shepherd, she had had several severe attacks of excessive pain in the abdomen, with incessant vomiting, great tenderness, with high temperature. At this time her medical attendant noticed a tumor to the right of the umbilicus. This tumor was apparently about the size of a fœtal head, to the right and over-lapping the median line below the umbilicus; it was freely movable, dull on percussion, and tender It appeared to be smooth on the surface, and deeper down, hard and irregular. Patient had never had jaundice or attacks of hepatic colic. The growth was thought to be malignant, and probably connected with the bowel. An exploratory incision was advised, to which patient willingly consented. Operation was performed on June 17th, 1890. On coming down on the mass it was found to be an elongated portion of liver, and beneath this was a large hard mass, covered over by omentum and intestine, and looking like new growth. On separating this elongated portion of tissue from the mass, there was some hemorrhage and an escape of dark colored fluid; on introducing his finger, Dr. Shepherd felt a substance which, on removal with forceps, proved to be a large gall-stone; on introducing his finger still further, a constriction was met with; and beyond this, a cavity containing another large stone; this was extracted with difficulty. The edges of the cavity which had contained the gall-stones were so friable that they could not be brought to the abdominal walls. However, after some trouble

and by making use of liver and omentum, the space between the edges of the gall-bladder and the abdominal parietes was filled up, a drainage-tube introduced, the elongated lobe of the liver replaced, and the abdominal wound closed. The patient recovered rapidly, without any elevation of temperature or rise of pulse. Bile flowed freely from the wound for some days. The tube was removed on the fifth day, and bile ceased to flow on the fifteenth day after operation. At the end of the second week the patient went out driving every day, and has since been perfectly well. Dr. Shepherd stated that owing to the pressure of the ribs on the right lobe of the liver a true "lacing lobe" had been formed, the gall-bladder being entirely in this portion of the liver; the thinnest part of liver was directly over the neck of the gall-bladder and cystic duct, which produced stagnation of the flow of bile, and hence its thickening and the formation of gall-stones. The difficulties in the diagnosis of the case, even after the abdomen was opened, were alluded to, and the case was cited as an example of the advantage of exploratory incision, even in doubtful and apparently hopeless cases.

Dr. Chown, Winnipeg, cited a case of long-standing jaundice, where an exploratory incision was made. The pancreas was found irregularly enlarged, and by direct pressure shutting up the common bile duct. The gall-bladder was pushed to the right; the central incision was closed, and a second one made over the gall-bladder, on the right; the bladder was sewn to the edges of the incision by continuous suture; it was then opened and three ounces of bile removed; since the operation, the patient has passed all the bile through the fistulous opening. Six weeks have now passed, and there is no difficulty in keeping the fistula open. The jaundice is relieved; the tumor still exists, and therefore the relief is of a temporary character.

Dr. Oldright asked the indications for the operation of cholecystotomy.

Dr. Praeger, of British Columbia, narrated a case where there was enormous distention of the gall-bladder. Cholecystotomy was done with good results.

Dr. J. F. W. Ross asked if the continuous suture was necessary in Dr. Shepherd's case—adhesions form rapidly, and if the tube is kept clear for a short time, would adhesions not form and do away with the necessity of the suture?

Dr. Bell, Montreal, referred to the great difficulty in arriving at a diagnosis in these conditions. Dr. Bell thinks that sometimes a gall-stone may ulcerate through the intestine, and pass per rectum; he recorded a case where this probably occurred; the stone was an inch in its smallest diameter, and it was impossible for it to have come through the duct.

Dr. Shepherd replied.

THE MEDICAL SECTION.

Dr. McPhedran, Toronto, in the chair; Dr. F. G. Finley, Montreal, Secretary.

Dr. R. L. MacDonnell, Montreal, read a paper entitled

CARDIAC COMPLICATIONS OF GONORRHŒAL RHEUMATISM,

in which he reviewed the literature of the subject from its earliest mention, by Braude, in 1853, up to the present date, and criticized some of the reports put on record. The case books of the Montreal General Hospital, from the time of his connection with the institution to date, furnished twenty-seven cases of gonorrhœal rheumatism; of these there were six cases in which cardiac physical signs were present, but in three of these a history of rheumatism or scarlet fever could not be excluded. Two others had undoubted gonorrhœal rheumatism, and heart murmurs were found when the patients were admitted. In the sixth case cardiac symptoms were present at the outset. The patient, who was suffering from a gonorrhœa, was exposed to cold. Slight joint pains were present, followed by urgent dyspnœa and pericarditis. Endocarditis and pleuritis subsequently.

Dr. Graham, of Toronto, was not prepared to accept the possibility of a connection between gonorrhœal rheumatism and cardiac affections. He was inclined to think that Dr. MacDonnell's case was merely acute rheumatism, with heart complications occurring in a man who had gonorrhœa, and he pointed out that the trivial nature of the joint pains supported this theory. An old endocarditis might be again set in action by a recent gonorrhœa.

Dr. R. L. MacDonnell said, in replying to the criticism of his paper, that cases were on record where the joint pains were absent altogether,

the endocarditis occurring suddenly in the course of a gonorrhœa.

Dr. Nesbitt read a paper on the

PHARMACOLOGY OF SALICYLAMIDE.

Dr. Stewart, of Montreal, spoke in high terms of the energy and industry of the reader, in carrying out scientific investigation with such a good result.

Dr. F. G. Finley, of Montreal, read a paper on

SPINAL SYPHISIS.

After referring to the pathology of the disease in general, and the variety of forms it may assume in the spinal cord, he read the histories of two cases he had had under observation recently. In one a gumma probably pressed upon the cord, and the symptoms rapidly yielded to the administration of mercury. The second case was probably of the nature of a myelitis, and had been but slightly influenced by treatment.

Wednesday, Sept. 10th.

Dr. Chown, Winnipeg, read a paper on

HYDATID TUMORS.

He referred briefly to the life history of tænia echinococcus, and of the manner in which the larval stage was accountable for the formation of the hydatid growths. These growths may occur in any part of the body, but are most frequently met with in the liver; then we find them in the peritoneum, the lungs, the brain, or in the muscles. The mode of development of the hydatid cyst was explained; the formation of the outer firm fibrous capsule, lined by the mother sac, from which daughter cysts were developed; sometimes even a third or fourth generation appeared. The sac increases in size according to the number of cysts and the quantity of fluid contained. The heads of the tænia echinococcus may be found in various stages of development. The fluid has a specific gravity of about 1013, is neutral or slightly alkaline, contains chloride of sodium, but no albumen. It is usually clear, but may be rendered turbid when a large number of heads of the tænia echinococcus is present. The symptoms of these growths depend on their size and position. We may have secondary trouble, such as jaundice, ascites, anasarca, or paroxysmal pains, œdema, varicose veins, etc.; if in the lungs, we have dyspnœa, cough, or even hæmoptysis; if in the abdomen, we may have anorexia or vomiting, and pain after eating. Cysts may undergo changes of various kinds, *e.g.*, calcareous degeneration, absorption of fluid and caseation or suppuration. Rupture may occur into the bronchi, bladder or uterus, or it may occur into the peritoneal cavity, and cause death. Occasionally it ruptures into the intestine.

The diagnosis is often impossible without an exploratory operation. Hydatid fremitus is rarely obtained; it is supposed to be due to the rubbing of one daughter cyst upon another; it is only after long experience that one can learn to recognize it, and is of very litttle diagnostic value; the microscopic examination of the fluid will help one to distinguish from urine, from the contents of an ovarian cyst, and other fluids.

The methods of treatment spoken of were: (1) Electrolysis, (2) puncture and drainage, (3) incision, and (4) excision. Puncture and drainage is the commonest method of treating these growths—the contents are withdrawn, and the cyst collapses; this is followed by free exudation into the cyst, which, however, absorbs readily. There is no danger if the operation is performed with antiseptic precautions. The indications for this form of treatment are, when the tumor is of moderate size, and in some of those tumors situated in the liver, lungs, or spleen: incision is performed when the tumor is situated within the peritoneum; after securing adhesions the tumor is freely incised; this is necessary in those growths in which there are many daughter cysts. Enucleation is necessary in some cases.

Dr. Chown narrated the history of a case where a large number of cysts existed in a man thirty years of age; sixteen separate cysts were removed from different parts of the abdominal cavity.

Dr. Cameron, of Montreal, then read a paper on

THE TEMPERATURE OF THE PUERPERAL PATIENT.

At the beginning of labor the temperature is normal, but it rises as labor progresses; it rises higher in primiparae than in multiparae. It varies with the length and severity of labor. During the first twelve hours after labor there is a rise; during the next twelve hours the temperature gradually falls. In births occurring from 5 a.m. to 2 p.m., the highest temperature is reached; in births from 2 to 6 p.m., the tem-

perature does not rise so high; and in births from 6 p.m. to 4 a.m., the rise is very slight. Therefore, in general, in births during the night there is little or no rise; and in births during the day the rise is marked. These variations are within the normal range; the proportion of non-febrile cases in midwifery should be about 80%. As a cause of febrile symptoms, "milk fever" is often spoken of, but it has been proved over and over again that lactation is physiological, and there should be no rise in temperature during the establishment of lactation. There may be a slight temporary rise in an excitable patient when the breast fills rapidly, but this is transitory. There is many a tale told by the old-fashioned nurse of the dire consequences when the milk reaches the brain, etc. The causes may be grouped under the headings of infectious and non-infectious. Of the infectious causes we have (1) wound infection; a poison may be introduced through lacerations in the parturient canals; this may be benign or malignant, depending on the virulence or amount of the organisms, or upon the resisting power of the body tissues. Clots may lie in the genital tract, and may there become infected. Micro-organisms are always introduced from without; if the term "anto-infection" means spontaneous infection, then there can be no such thing. We may have developed vulvitis, endometritis, cellulitis, lymphangitis, peritonitis, phlebitis, arthritis, or acute septicæmia, in all of these the temperature rises rapidly. (2) Dormant tendencies may be roused into activity, *e.g.*, an exacerbation in phthisis, pneumonia, or bronchitis; or some one of the exanthema, malaria, or diphtheria, may have been incubating, and may be precipitated by labor. (3) Cystitis may develop; or (4) skin affections.

Of the non-infectious group of cases, we have (1) emotional, profound physical disturbances, *e.g.*, grief, illegitimate labors, etc. (2) Exposure to cold. (3) Reflex irritation, digestive derangements, *e.g.*, constipation.

Thus a high temperature in a lying-in woman may be serious or not serious; we are apt to think of what we most dread, and to suspect septicæmia when the temperature rises.

The lessons we learn from a consideration of these points are (1) the necessity for antiseptic measures throughout, thorough in detail. We must prepare the field by washing the vulva with 1-1000 perchloride of mercury; in the second stage we may use a prophylactic douche if there be a leucorrhœal discharge; disinfect hands, instruments, etc., and use no sponges; vaginal examination should be made as seldom as possible; douche immediately after a prolonged vaginal examination; examine carefully for lacerations after the child is born, and carefully close up any wounds with suture, after cleansing with an antiseptic; thorough cleanliness and antiseptic precautions throughout the puerperium; corrosive sublimate is the best antiseptic. If a man carries out antiseptic details, and a rise of temperature occurs, he need not take alarm, as it is, under these circumstances, in all probability, due to a non-infectious cause.

In the discussion which followed Dr. Cameron's paper, Dr. Sweetnam referred to a cause of a rise of temperature not referred to in the paper, namely, an abrasion of the breast where infection occurred; he narrated two cases.

Dr. Mullin, of Hamilton, believes that there is a particular cause for each case of puerperal fever, and the attendants are responsible. It is a question whether or not the "non-infectious" causes put forward to explain the rise in temperature are not merely produced to account for mild cases of septicæmia, in which our antiseptic measures have failed. One important means of preventing the condition is to remove all elements capable of becoming infected, *e.g.*, clots in the vagina, and preserve scrupulous cleanliness.

Dr. Praeger, of British Columbia, stated that the use of antiseptics had certainly not added to the mortality, and, therefore, if its efficiency be even a mere matter of doubt, we should give our patients the benefit of that doubt, and use antiseptics. He narrated an experience he had some years ago where, during a scarlet fever epidemic, he was unable, although observing scrupulous cleanliness, to prevent puerperal fever in his lying-in patients. Recently, however, during an epidemic of diphtheria, where he attended diphtheritic patients and confinement cases, he was enabled, through the use of antiseptic precautions, as well as the observation of cleanliness to prevent septic infection in any one of his cases.

The discussion was further taken part in by Drs. Sloan, of Blyth; Dickson, of Pembroke; Lap-

thorn Smith, of Montreal; Gardiner, of London; Armstrong, of Montreal; and Dixon, of Toronto.

Dr. Cameron replied.

Wednesday evening.

Dr. Muir read the address in

MATERIA MEDICA AND THERAPEUTICS.

He first called attention to the fact that the majority of practitioners neglected the study of materia medica, and were not as conversant with the subject as they ought to be. The adulteration of drugs was spoken of, and quotations made from the pharmaceutical report of New York State, and Rusby's report on the action of drugs. Dr. Muir then reviewed the work recently done in the investigation of the action of certain drugs, especially in the groups of antipyretics and heart tonics, and then referred to some of the newer drugs—exalgine, ural, thyol, icthyol, thyol-resorcin, and chloramid. Last of all he discussed the anæsthetic, chloroform, ether, and cocaine. Cocaine poisoning was spoken of as a serious result of the careless use of the drug; toxic effects are very apt to follow even small doses; especially if used about the mouth and head.

Dr. Bell, of Montreal, differs from Dr. Muir, and considers that chloroform is a more dangerous anæsthetic than ether. Dr. Bell uses ether as a general anæsthetic, and gives chloroform only in special cases, *e.g.*, in children, in cases where there is disease of the blood-vessels, or in tubercular disease.

Dr. McPhedran condemns the promiscuous use of antipyrin by the public there is, he considers, much danger in the prostration produced by it. He has found no benefit from it in diabetes. Creasote in phthisis is good in certain cases; it is no good in the acute disease, but acts better in chronic phthisis, particularly in males; large doses must be given.

Dr. English, of London, also took part in the discussion.

Dr. McPhedran, of Toronto, read a paper on

PERNICIOUS ANÆMIA.

He recorded five cases of this disease. In the first a physician, there was a history of failing health with anæmia for three or four years. Continued practice until April, 1889. When first seen on May 1st, he had just had a severe chill; the temperature was 104°. He was semi-conscious and delirious. Pallor extreme, with marked, yellow-greenish tint; conjunctiva pearly. Not emaciated. There was vomiting and diarrhœa, with much painful flatulence. The blood contained 745,000 red corpuscles per c. mill., instead of the normal 5,000,000, the characters of the corpuscles being those typical of pernicious anæmia. The urine was of normal amount, acid, very high-colored, and low sp. gr., no albumen. As soon as the stomach quieted, arsenic was given, gr. ¼, daily, in divided doses every two hours. There was not much change for two weeks, after which he improved gradually. He was able to walk out in June, and returned home early in July, up to which time he had continued the arsenic regularly; its use was intermitted after that. He regained his health fully by October, and has since continued well.

Case 2.—Had a long history of failing health also. He had no acute symptoms; his condition was typical of pernicious anæmia. The blood contained only 606,000 corpuscles per c. mill. He could take arsenic only a few days until pain was caused in the stomach. It was intermitted until the pain abated, when the arsenic was given again, to be intermitted when the pain became troublesome. He improved slowly, often relapsing. His urine had the characters described in case 1. He made a complete recovery in eight months.

Case 3.—A lady, after the birth of her second child, showed marked and increasing anæmia, with gradual development of the "lemon" tint; urine dark, and low sp. gr.; blood typical. Made a good recovery in six months The cause here was probably an unsanitary condition of the house.

Case 4.—A physician—the anæmia followed *la grippe*. All the symptoms typical. Vomiting was especially prominent, so that malignant disease was suspected. During the exacerbations many casts were found in the urine, heavily loaded with black pigment granules, also much free yellow granular pigment in masses; this pigment disappeared, as the exacerbation abated. No improvement thus far.

Case 5 is now under care. She had a similar attack two years ago, and improved without special treatment.

In all these cases there was some irregular elevation of temperature; pallor, with the "lemon" tint, but without emaciation, high-colored urine of low sp. gr., the characteristic blood changes, and the gastro-intestinal disturbance. The disease appears to consist essentially of excessive blood destruction in the portal system, due to some poison absorbed from the intestinal tract, in which there is probably greatly increased putrefaction going on. What the poison may be is uncertain.

In the treatment of these cases, the bowels should, as far as possible, be kept clear of decomposing matter, and disinfected. In most cases an occasional mild calomel purge will do good, followed by an intestinal disinfectant, such as beta-naphthol gr. 5, or thymol gr. 3, three or four times a day.

Of the first importance, however, is the administration of arsenic; few cases get well without it. It is best given in small doses, say gr. $\frac{1}{10}$, every two or three hours after food. If not well borne, smaller doses, even a half drop of Fowler's solution, should be tried, every hour. Most cases bear it given freely. It probably acts on the blood, rendering the hæmoglobin more difficult of being dissolved out of the corpuscles. When it fails, after being perseveringly tried in all the different methods iron should be tried—it sometimes succeeds. Hydrochloric acid should be useful in preventing decomposition in the stomach, increasing peristalsis and promoting digestion and absorption. The diet should be highly nutritious, consisting of the iron-bearing foods, as yelk of egg, milk, meat, and cereals of all kinds. It is said that these foods increase the blood destruction, so that if a case is not doing well, it would be desirable to confine the patient to the farinaceous, omitting the nitrogenous foods. As all cases of pernicious anæmia are distinguished only after they have lasted some time, it would be well to treat all grave persistent anæmias with arsenic, as it is useful in all kinds. By so doing, some cases of pernicious anæmia might be prevented possibly.

Dr. Stewart, of Montreal, spoke of the treatment of pernicious anæmia with arsenic. He administered it in doses of m. ½, Fowler's solution, every hour, and given in this way it does not cause gastric irritation.

Dr. Graham classified cases of pernicious anæmia, as (1) those cases which prove fatal, (2) those cases amenable to treatment, and (3) those occurring after confinement. The disease is a very obscure one.

Dr. McPhedran replied.

Thursday morning.

Dr. Lapthorn Smith read a paper on

APOSTOLI'S METHOD.

He first of all described the proper way of carrying out the treatment scientifically and efficiently, and spoke of the causes of failure, one cause being that of not applying the positive electrode to the whole of the uterine surface. Sounds are sometimes inefficient, because in many cases there exists several curves in the cavity of the uterus. Dr. Smith has used a flexible bougie, by means of which he has been able to overcome the difficulty. The cause of failure in these cases is that the whole of the bleeding surface is not treated; by means of the flexible bougie, however, this can be done most efficiently. Two cases of failure were narrated, due to the curves in the cavity. A projecting fibroid may cause an extra curve in the uterine cavity.

Dr. Holford Walker then read a paper on the same subject, and narrated several cases which he had treated successfully.

In the discussion which followed, Dr. Walker referred to a case in which Dr. Smith's flexible bougie would have proved of great service to him had he known of the instrument.

Drs. Dickson, of Toronto, Sloane of Blyth, and Henderson, of Kingston, took part in the discussion, and Drs. Smith and Walker replied.

Dr. B. E. MacKenzie, of Toronto, then showed

A CASE OF LATERAL CURVATURE OF THE SPINE.

Boy, 11 years. Five years ago the boy's mother noticed the shoulders and hips not held symmetrically in relation to the spine. There is now a marked dorsal curve to the left, with rotation and lumbar curve to the right.

He has been under treatment six weeks, and under Dr. MacKenzie's supervision takes exercises selected for the purpose of developing such muscles as make greatest correction of the deformity. By an effort it is found that the boy can now almost straighten the spine, and can hold himself so as to measure three-fourths of

an inch more in height than he did six weeks ago. To secure the best results it is essential to secure the hearty co-operation of the patient. It is necessary to insist that the best possible attitude be assumed and maintained throughout, that corrections be made constantly by the surgeon, and by the patient when standing before a large mirror. In this manner the senses of the patient must be assiduously and patiently re-educated. In this case a girdle was employed, secured to the wall by a hook, and passing over the part of the ribs on the left, made prominent by spinal rotation in the dorsal region. While the patient throws his weight upon the girdle, it is seen that he can over-correct the dorsal curve. At the same time strong force is with the surgeon's hands to press inward and forward the prominent angles of the ribs behind, and inward and backward the part of the ribs of the right side opposite, thus correcting the rotation; at night the patient lies upon the cradle so commonly employed.

Such treatment is much more satisfactory than treatment by any form of jacket, which restrains the normal movements and causes atrophy of the muscles intended by nature to hold the spine erect. In very extreme cases of curvature it may be necessary to use supports.

To attain success, it is necessary (1) to give unremitting personal attention for several months. (2) To have the hearty co-operation of the patient—not only the assent, but the positive determined will. (3) To observe the patient in various attitudes, and to study the effects of various exercises, so as to strengthen those groups of muscles which are most effective in retaining the best attitude that can be assumed. (4) To combine intelligently the use of a moulding power upon the deformity, such as by the hands of the surgeon, or by Barwell's girdle.

Dr. H. S. Birkett, of Montreal, read a paper on a case of

HEMIATROPHY OF THE TONGUE.

In this case (a male, æt. 23) there is atrophy of the right half of the tongue; tactile and special sense of taste intact; paralysis of the right side of the soft palate; diminished sensation of the mucous membrane of the buccal and naso-pharynx; very limited movement of abduction and adduction of the right vocal cord; persistent myosis of the right pupil; and when pressure is made upon a small, thickened, and infiltrated area, situated on the right side of the neck, just in front of the anterior border of the sterno-mastoid muscle, and at a level of a line drawn backwards from the angle of the lower jaw on the same side, the effect is to produce marked flushing and sweating of the right side of the face with dryness of the throat—these last named symptoms passing off when the pressure is removed. There never was nor is there any difficulty in deglutition; speech was at first affected, especially for words containing the letter "r"; pulse 98. The cause of the symptoms is the involvement of the hypoglossal, vagus, and accessory nerves of the branches of the pharyngeal plexus, and of the superior cervical ganglia of the cervical sympathetic in cicatricial and inflammatory tissue, the result of a large and painful swelling at the angle of the lower jaw on the right side, which came on during convalescence from an attack of mumps nine years ago.

The deductions are: (1) That the hypoglossal is the motor and trophic nerve of the tongue. (2) That the glosso-pharyngeal nerve is concerned in the function of taste. (3) That the branches of the pharyngeal plexus supply the mucous membrane of the buccal and naso-pharynx with sensation. (4) That the motor nerve of the levator palati and azygos uvulæ muscles is probably the accessorius. (5) That the superior cervical ganglia of the cervical sympathetic contains (*a*) dilator fibres to the iris of the same side, (*b*) vaso-motor (*c*) sweat, (*d*) and special secreting nerve fibres.

Hospital Reports.

A CASE OF UNADMITTED PREGNANCY.

UNDER THE CARE OF DR. J. F. W. ROSS, IN THE TORONTO GENERAL HOSPITAL.

L. T., æt. 26, single. Menstruations began at 20, and have been irregular in their appearance ever since. She has not menstruated for three years. She complained, on admission to the hospital, of a swelling in the abdomen, which she noticed for the first time two years ago; this has gradually increased in size. The abdomen was examined, and the patient was carefully questioned as to the possibility of her being pregnant, but she gave positive assurance

that she was not. The breasts gave no evi dence of pregnancy excepting a slight discoloration of the nipple. Careful examination failed to detect any fœtal heart sounds. Vagina showed no discoloration such as is observed in pregnancy, but it was remarked that there was a laxity of the parts as in the pregnant condition. The stethoscope was inserted to detect any placental bruit with negative results. All present excepting the doctor and the nurse now went out of the room, when the patient was again questioned concerning any possibility of her being pregnant; the doctor also warned her that in case she were and did not admit it, what he was now about to do would endanger her life. She still said it was impossible. Those absent now returned. The speculum was introduced. From the appearance of the os uteri the doctor thought she had had a child. This she denied, but said an operation was performed on her three years ago, when a polypus was removed. The sound was next introduced and passed 4½ inches. Further examination was not made. She was asked to come in as an internal patient. She came in on the next day (Friday). On Saturday morning, owing to a mistake being made in names, this patient was being prepared for a serious operation, the mistake was soon noticed, yet the patient was quite willing, without admitting her pregnancy, to be prepared for an operation, the gravity of which she knew. Saturday afternoon the examination of her case was continued. She again said that what she said on Thursday was true. The sound was passed 7½ inches. The os uteri was well dilated. The doctor thought the diagnosis lay between a myoma and pregnancy. To make a better examination the patient was anæsthetized with chloroform. The finger was now inserted in the os, and a diagnosis given as a case of pregnancy. The head, and the hands or feet could be felt. Applied also ballottement. Also heard fœtal heart sounds by pressing well the end of the stethoscope on the abdominal wall.

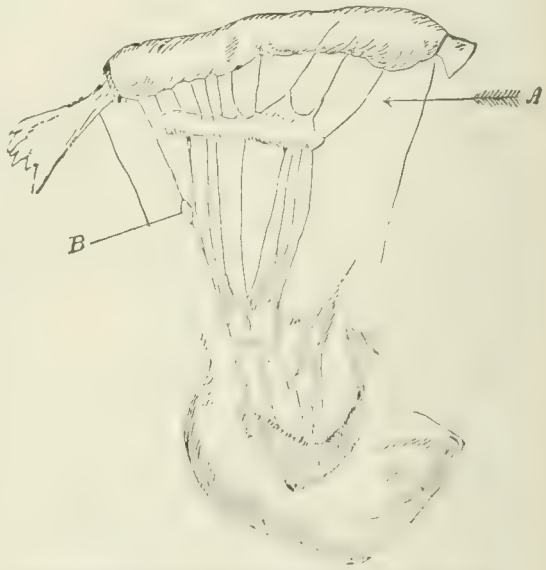
The next International Medical Congress will be held in Rome in 1893.

Hot claret is said to be an excellent gargle in acute sore throat, being an agreeable astringent and non-poisonous.—*Coll. and Clin. Rec.*

Pathology.

SIMPLE CYSTS OF THE BROAD LIGAMENT.

Dr. Wm. Goodell, of Philadelphia, in his paper on "Intraligamentary Cysts," published in the transactions of the Philadelphia Obstetrical Society, places them in two classes, viz., unilocular papillomatous cysts, and multilocular papillomatous cysts. The unilocular variety he refers for its origin to a so-called degeneration of the parovarium tubules—the multilocular he refers, with Doran, to fœtal relics in the hilum tissue of the ovary, these fœtal relics being the remains of the "mesonephros" or Wolffian body. In addition to the two above



A Tubules, supposed to be aberrant parovarian tubules, and on which cysts are found. B Small parovarian cyst.

mentioned forms, Doran and Bland Sutton speak of a third class, which has been denominated "simple cysts" of the broad ligament, and in regard to which both of these authorities have come to the conclusion that they are unconnected with the parovarium. Sutton has further concluded that in some cases, at least, they are formed from lymphatic vessels by dilatation. In support of this view, he describes on page 209 of his "Introduction to General Pathology," a specimen of simple broad ligament cyst, the connexion of which with the lymphatic vessels of the broad ligament was easily demonstrated, since the coagulation of lymph within

the vessels provided him with a natural injection of these channels. In spite of this testimony to the contrary, I would still venture to suggest that some at least of these small, even minute, cysts, which are so frequently found studding the broad ligament, and particularly where the peritoneum is reflected over the Fallopian tube, may be due to dilatation of pre-existing tubules, which are connected with the parovarium. This conclusion has been arrived at after dissection of a considerable number of specimens. A cut of the most perfect of these is presented with these notes.

I would not be understood to say that this mode of origin of these cysts obtains in *all* cases. Facts like those brought forward by Mr. Sutton prove the contrary, but specimens such as represented in the accompanying cut are, to my mind, extremely suggestive. Nor does the fact that in the majority of cases we are unable to show connexion between such a cyst and a tubule seem to invalidate the argument based on this specimen; since if only in *one* instance can the connexion with lymphatics be demonstrated, much more difficulty might reasonably be expected in the case of tubules, which are merely fœtal remains, and only accidentally find their way to such an abnormal situation.

In the specimen presented there is to be seen a series of tubes running from the Wolffian duct upwards towards the Fallopian tube, and apparently connected with the duct, just as are the tubes from Rosenmüller's organ below. The appearance presented is very striking, and has been found in only a single specimen. Another specimen, however, seems to show that one of the segmental tubes of the parovarium is continuous with a short tube running upwards in the same direction as those figured. That the lower tube is parovarium is proven by its position, and the presence on it of a cyst. The most careful dissection could not separate it from the process above running towards the Fallopian tube. That the process above is a similar tubule is shown by the fact that its dimensions are even, and that it ends abruptly. As to how or why such an abnormal disposition of these tubules should come about, I can offer no definite opinion. Possibly the Müllerian duct may have been so placed that, in taking up its position as Fallopian tube, it dragged some of the Wolffian tubules with it.—J.C.

Correspondence.

LETTER FROM DR. J. E. GRAHAM.

Editor of THE CANADIAN PRACTITIONER.

DEAR SIR,—Very great progress has been made in the cause of higher education in France, during the past fifteen years. In 1875 a determined effort was made to place the academies or schools for higher education upon a proper foundation, and the results have been simply marvellous, especially when it is remembered that France was at that time suffering from the effects of a defeat which would have entirely crushed most nations.

Twenty million dollars have been spent on the erection of new buildings. More than half of this amount has been contributed by the cities in which the Universities are situated. It was felt that without generous subscription from the cities, little could have been done in the way of obtaining State aid.

The people of Toronto would do well to profit by her example, and not be niggardly in their donations to the University which does so much for them. The city of Paris gave over five millions for the erection of new buildings, Lyons nearly a million and a half, and Bordeaux over half a million.

It is especially worthy of notice that in these improvements the faculties of medicine have received a share in the same proportion as that of arts or law. The ridiculous idea that public money should not be used in the furtherance of purely professional education, does not prevail in France, nor anywhere else on the Continent for that matter. It is recognized that in medicine a full and comprehensive education cannot be given without outside aid.

For years past the tendency in France has been to centralize the faculties for higher education in Paris. Five-eighths of all the students of France attend the University of that city; and of the 1,192 foreign students more than a thousand are to be found in Paris. In this respect the educational system of France differs widely from that of Germany. In the former country there are no universities to compare with those of Bronn, Gœttingen, Heidelberg, Leipsic, etc.

Efforts have recently been made to give the outside academies, as those of Lyons, Nancy, and Bourdeaux, such advantages as would put them on a similar basis to that of Paris. Whether this movement will be successful or not remains to be seen.

In Germany and Switzerland one is struck by the wonderful development of the universities of the smaller cities. I had the privilege of spending a few days in Lausanne, Geneva, Zurich, and Heidelberg, and of looking somewhat into the educational systems in each of these cities.

In Lausanne the University was not fully equipped until a few years ago, when it received a very large legacy. It now possesses a very good medical faculty. In the University of Geneva there is also a medical faculty. Zurich, however, possesses the most distinguished medical faculty, as well as the best faculties for the study of medicine. The pathological, physiological, and physical laboratories, are very complete, and quite large enough for the class of students in attendance.

The hospital, although small, containing about 150 beds, must be very rich in clinical material. Although daily clinics are given, both in medicine and surgery, there seems to be an abundance of interesting cases.

The course of instruction in the medical department of the German Universities is excellent. In the first place a thorough and practical training is given in the primary branches. A mere book knowledge of these subjects is considered of little use, and nothing short of a laboratory training is demanded. In the final branches the instruction given is of the most practical character. Didactic lectures are largely done away with, and those of a clinical character substituted. Two clinics, of an hour and a-half each, one in medicine and the other in surgery, are given daily.

In Zurich I had the pleasure of hearing Dr. Eichorst give a clinical lecture on two cases: one of floating kidney, and the other of tuberculosis of the kidney.

The patients were both females, and were brought in on their beds. They had a very easy and convenient way of moving the beds from the wards into the lecture room.

In the first case the lecturer wished to demonstrate that the tumor to be felt in the abdomen was not connected with the stomach. To do this he dilated the stomach by giving the patient first a small teaspoonful of sodæ bicarb., followed by one of tartaric acid. The stomach was known to be large, and an œsophageal tube was at hand in case of unpleasant symptoms. The patient was exposed to a much greater extent than is usual in our hospitals, and the rapid increase in size of the abdomen was watched with interest and some amusement by the class. It served, however, the purpose for which it was intended. The second case the lecturer examined very carefully. The history, read by one of the students, was very full, and must have been written after a thorough supervision by either the professor or one of his assistants. The differential diagnosis was then taken up, and the urine was then examined, chemically and microscopically. It was found to contain not only pus, but tubercular bacilli.

In Heidelberg I heard Professor Erb, and was even more astonished at the apparent wealth of material there, although the hospital is a small one.

He first demonstrated the varieties of gait in different nervous affections, and for that purpose exhibited three or four cases of ataxia. Three of hereditary spasmodic tabes, one of pseudo hypertrophic muscular paralysis, two of paralysis of groups of muscles in the legs, two of partial paraplegia from transverse myelitis, and a case of anchylosis of the hip joint.

He afterwards gave a lecture on a case of subacute ascending anterior polio myelitis, combined with some peripheral neuritis, at least that was the diagnosis made. He went thoroughly into the differential diagnosis between these conditions, acute ascending paralysis and multiple neuritis. He also referred to the theory recently promulgated by Dejaiene, that all these are really cases of multiple neuritis. He did not agree with Dejaiene, but at the same time admitted that both conditions were frequently found in the same patient. The lecture was most interesting, and evinced a large amount of work in its preparation.

After visiting these universities, I came to the conclusion that a very large hospital is not necessary in order to give a good course in clinical medicine. There are, however, certain

essential points: (1) The hospital should be so arranged that patients can be easily taken into the theatre without being removed from their beds. This can be done if the lecture-room is on the same flat as the wards. (2) The teaching staff should have full control of the hospital, and each professor should have separate and distinct wards. (3) It is necessary that each lecturer should spend at least three or four hours daily in the hospital, and that each case should be fully elaborated in every particular, before it is brought into the theatre. Thoroughness of examination should be inculcated at all times.

In one respect the German system is not so good as the English, or as that adopted in Toronto. The students are not brought into such immediate contact with the patients, and there is less tutorial instruction given. In the latter particular the Edinburgh school excels all others.

During the week before the commencement of the Congress, I had the privilege of hearing some clinics in the Charite, especially those of Dr. Genhard.

In a former letter I referred to the great number of old men who held the professional chairs in the Paris University, and the same is also noticeable in Berlin.

Professors who have made their mark in the smaller universities, are often called to Berlin at the age of forty-five or fifty, and the effect is that much younger men are found in Heidelberg, Leipsic, etc., than at the capital. The result ought to be in favor of the latter city; only men of ripe experience are found in the university. There is, however, a tendency for older men to become garrulous and to depart very frequently from the subject under consideration. This tendency ought to be fought against, as disconnected remarks and stories of personal experience, although very interesting at the time, are not always of the most advantage to the student. The lectures which I heard in Heidelberg and Zurich were quite free from this; whereas that of Dr. Genhard was partly made up of anecdotes of practice, and the discussion of subjects aside from that under consideration. His lectures, notwithstanding, were most excellent, and gave evidence of a long experience in practice.

The great International Congress of Berlin is now a thing of the past, and, if the truth must be told, there was on the part of many a feeling of disappointment at the results. The very large attendance, the great number of eminent men present, and the character of Berlin as a seat of medical education, all would lead one to expect a most successful gathering.

With all these advantages, it lacked one feature. The place of meeting, although very beautiful, was not adapted for the purpose, and the result was that one could not either hear or see to advantage.

Again, a number of men of great assurance and little brains will persist in occupying time which should be given to the leaders of the profession. If the meetings of section had been held in the University class-rooms, and if there had been some supervision of papers, the results would have been very different.

In all other respects the arrangements were excellent, and the social features all that could be desired. The hospitality of the people of Berlin was unbounded. The Ladies' Committee undertook the entertainment of lady visitors, and most successfully carried out a programme of luncheons, dinners, receptions, etc., for each day.

No one was received with greater enthusiasm than Sir Joseph Lister, who shared with the honored President, Dr. Virchow, the honors at the celebrated Rathhaus banquet.

LODGE PRACTICE.

Editor of CANADIAN PRACTITIONER:

SIR—While agreeing in the main with your editorial remarks in your issue of 16th August, and with those of Dr. McKinnon in that of 1st Sept., allow me to say that exclusion of those who engage in such practice from the Ontario Medical Association, is something they themselves have brought upon themselves, and that with their eyes open. It is not "a drastic measure," as you say, that they were not aware of, would or could be applied, because the Association's Code of Ethics (Art. viii, § 3) reads:—

"Neither societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege," namely, "valid claims for gratuitous services."

Those who wish to engage in such practice should have such section either erased or amended. Not one of several to whom I have mentioned the subject defends for a moment the practice, but agrees in deploring its prevalence. From this, I infer that a proper presentation of its enormity and wrong, will at once secure a promise from every honorable member of the profession that he will, if not resign forthwith, at least not renew his contracts when his present term expires. There is nothing "drastic" about that—he simply stays in the fold, or goes out, of his own action.

It is well enough known that most of these societies are wealthy and have funds invested. Such then should not receive our services as paupers or mendicants. Their membership and successful working are largely due to their furnishing medical attendance free. That is the main consideration for members to join.

Those physicians who serve them do so as an indirect means of advertising (at the expense of the profession at large). Hence the Committee on Ethics did well to put their objections to lodge practice and newspaper advertising and puffing on the same level, and condemn both in the same breath and in similar terms. If one kind of advertising is tabooed so should the other; for, of the two, accepting lodge work is the more insidiously sneaking and underhanded. The result will then be that only the most degraded sort of practitioners will be willing to accept such dirty and degrading work.

GALEN.

Pamphlets and Reprints.

Prospectus of the London Post-Graduate Course.

Proceedings of the Society for the Study of Inebriety.

Address on Hygiene. By Thomas J. Mays, M.D., of Philadelphia.

Spinal Surgery, a report of eight cases. By Robert Abbé, M.D, Prof. of Surgery, Post-Graduate School of New York.

Relation of Eye-strain to General Medicine. By George M. Gould, M.D., Ophthalmic Surgeon to the Philadelphia Hospital.

In the August number of *Wood's Medical and Surgical Monographs* are found: *Morbid Blushing, its Pathology and Treatment.* By Harry Campbell, M.D.; *Alcoholism in Women.* By Dr. Thorneuf, Paris; *The Different Methods of Lifting and Carrying the Sick and Injured.* By George H. Darwin, M.D.; *Treatment of Ingrowing Toe-nail.* By Joseph Amiard, M.D.; *Chronic Bronchitis and its Treatment.* By William Murrell, M.D.

Personal.

DR. J. D. THORBURN (Tor. '87) has recently returned to Toronto from Manchester, England.

PROF. OSLER, of Johns Hopkins Hospital, Baltimore, paid a flying visit to Toronto, Sept. 23rd.

PROF. HOWARD A. KELLEY and his assistant, Dr. Robb, from Baltimore, were in Toronto September 20th to 22nd.

DR. MCFARLANE, of Toronto, met with a severe accident while returning from Europe. When he was getting off the steamer at New York, September 16, he fell and received a compound dislocation of the leg about three inches above the ankle joint. He was taken to the Long Island College Hospital in Brooklyn, where he remains at present. No serious symptoms have appeared, and his condition is favorable in all respects.

Miscellaneous.

REFORM IN THE BURIAL OF THE DEAD.—We are glad to see that the subject of funeral reform is engaging the attention of the clergy. A society of clergymen in Topeka, Kansas, has passed resolutions opposing the custom, on the part of pall-bearers and friends, of uncovering the head at the commitment of the body to the grave. The local medical society has unanimously endorsed these resolutions. It would be well if all similar associations would pass resolutions to the same effect.—*Brooklyn Medical Journal.*

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

☞ Business Management. - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, OCTOBER 16, 1890.

Original Communications.

OPENING LECTURE OF THE FOURTH SESSION OF THE RESTORED MEDICAL FACULTY OF THE UNIVERSITY OF TORONTO.

BY J. E. GRAHAM, M.D.

Mr. Vice-Chancellor, Ladies and Gentlemen:

I regard it as a great honor and privilege to give the opening lecture of this, the fourth session of the restored Medical Faculty of Toronto University.

There are some who look upon inaugural addresses as antiquated and useless. It is certainly difficult to find new and interesting matter for each year. This is more especially the case in the old-established medical colleges of Europe; but in this comparatively new country, where there are necessarily many changes and much improvement of the new upon the old methods, one can more easily select a theme which may be of interest to the students, to the profession, and to the public at large.

We all deeply regret that, owing to the fire of this year, this celebration cannot be held in the Convocation Hall, as formerly. On the other hand, we all rejoice that what seemed at one time an overwhelming disaster, is likely to become a real benefit, and that the University will rise from its misfortune to greater glory and usefulness.

There are many things in nature which are so easy to obtain, and of which there is such a profusion, that we are not conscious of the great benefits they are conferring upon us, until they are partially taken away or there is a threatened danger of their entire removal.

In the same way the people of this Province have had such easy and free access to this University that they became, to a certain extent, unconscious of the great benefit they derived from it, until there appeared some danger of its destruction. The expressions of love and admiration heard on all sides, as well as the handsome donations already made, are strong evidences that the public have at last begun to realize the great value of this institution and the importance of placing it on a thoroughly satisfactory basis. Let us hope that the good work will not cease until this University is made to take its proper position among the very first of this continent—in fact, of the world. The people of this Province are sufficiently wealthy and intelligent to demand nothing less, and it is to be hoped that the necessary funds for every improvement will be provided for, either by public or private endowment.

Three years ago, Prof. Wright, in the inaugural address of the first session of the restored medical faculty, alluded to the history of European universities, and of the great advantages they had derived from their medical faculty. He also demonstrated, by means of a chart, the disproportion between the increase of the Arts and Medical students during past years in

Toronto University, and, moreover, stated his conviction that its medical graduates were attached to their *alma mater* by but slender ties.

He then expressed the hope that the formation, or rather the restoration, of the medical faculty would increase the number of graduates, and would at the same time produce among the students who received their education here, a stronger bond of union with their University.

That these hopes have so far been abundantly realized, is shown by the history of the past three years. In 1887, the last year of the old order of things, there were only thirty medical graduates, whereas, in the spring of 1890, the number was fifty-three—an increase of twenty-three.

That the attachment of the undergraduates has been strengthened, is well evidenced by the gathering of students such as I see before me to-night. Your number and enthusiasm indicate strongly your appreciation of the type of education which this University is endeavoring to place within your reach.

It is to be hoped, gentlemen, when you go out into active professional work you will use your influence, that these privileges which we now enjoy shall be increased, not diminished, and least of all, taken away.

Three years ago, hopes were expressed, not only in Toronto, but throughout the Province, that the institution of this faculty would have the effect of raising the standard of medical education, so that its success would be shown by the quality of its graduates, as well as by their number.

Now that three years have passed, to what extent have these expectations been realized? Has the character of medical education been improved? Any one who will read the Announcement of this year and compare it with those issued five and six years ago, will be convinced that a great advance has been made in the methods of instruction in many departments

Whereas, students were then able to graduate with a very superficial knowledge of the microscope, now they commence to learn the use of that instrument during the first month of their course. Then the instruction given in the primary branches, such as physiology and chemistry, was largely of a theoretical character; now these branches are taught in the laboratory, and the student is required to make experiments for himself.

The methods of instruction now employed in the dissecting-room are copied from the best-regulated dissecting-rooms of Great Britain. This, together with the increased number of demonstrators, is evidence of the great progress made in the teaching of anatomy.

As will be mentioned further on, the amount of clinical instruction given has been doubled during the last three years, and the teaching in pathology is of a more thorough and practical character than formerly.

Many of the most important processes of life cannot be understood without practical study of similar processes, as they are found in the lower animals. It is as if a student in mechanical engineering were placed before a most complicated piece of machinery and requested to study and describe its various parts, with their movements, before he had even seen the working of more simple pieces of mechanism.

Some will jeeringly ask of what importance is the study of the anatomy and physiology of the simpler forms of life, and how will such knowledge assist the student to understand disease in the human subject? Just in the same way as the study of the lever, the pulley, and of simple movements, will assist the engineer to at last so understand the most complicated machinery as to discover any defect or break which may exist, and to proceed at once to remedy it. Moreover, the student, besides receiving an excellent mental training, acquires in the laboratory a dexterity with the use of the microscope, the forceps, and the scalpel, which will be invaluable to him in the study of human anatomy and physiology, and in practical surgery.

In the laboratory, also, the pupil is taught to use his powers of observation, the proper training of which is a most important element of success in the practice of medicine.

Physicians all through their career are students of life in its various phases. Those before me to-day who have been the longest in practice will be the first to admit that they are constantly meeting with conditions never before observed. If, then, the processes of life are so varied and obscure in their manifestations, that none of us expect to fully understand them, how necessary it is that we should at least under-

stand, as far as possible, the fundamental principles of their operations, and this knowledge can be best obtained in a properly-equipped biological laboratory.

Physicians ought to rank among the first biologists, because they are constant students of the phenomena of life in the highest type of creation. That this is true, can be easily demonstrated by looking over the field of science to-day. The greatest discoveries in bacteriology, more particularly in those forms which produce disease in man, were made by two members of our profession, Lister and Koch. The latter made some of his most important investigations when he was engaged in country practice.

I am glad to state in this connection, that your lecturers in biology have also been students in Medicine, and this may account for their sympathy with you in your work, and for their enthusiasm in furthering your interests.

In the department of physics, the course is now of a much more practical and thorough character than formerly.

There are some men, whose minds dwelling on the good old times of the past, ask: Of what use is the study of prism, lense, and tuning-fork? What have these to do with the art of healing?

A fair knowledge of physics is necessary to an intelligent existence in any sphere of life; but a deeper and more practical knowledge is of the greatest importance to the medical student.

It is impossible for a physician to intelligently make an examination of the heart and lungs in the living subject, without having as a groundwork a good knowledge of the physical sciences. Then in surgery, how frequently a knowledge of mechanics is necessary in order to understand the movements of the skeleton, or to make apparatus for the keeping in place of broken bones.

Again, the great resemblance of nerve force to electricity, the varied effects of the latter upon the human organism, are of so important a character that, if the practitioner wishes to keep abreast of the times, he must have studied, not superficially, but thoroughly and practically, this branch of physical science. The study of physics is so intimately connected with medicine that some of the most distinguished physicists began their career as medical practitioners. I have only to mention the names of Dr. Young, Von Helmholtz, and Du Bois Raymond, in proof of this.

There are some who, while acknowledging the importance of biology and physics, are of opinion that, on account of the comparatively short time given for the medical course, the student should at once engage in more important work than dissecting down animals or examining physical apparatus. Now, let us enquire into this point more closely. The study of these branches is confined to the first year of the course. The student will gain more useful knowledge in an hour's demonstration, with proper apparatus, than he would obtain in a day from books and diagrams. He thus gains rather than loses time. If four winter sessions are not sufficient for the proper accomplishment of all the work, then one, two, or three summer sessions should be added. We are not doing justice to the public, we are not doing justice to the students themselves, if we allow them to pass out of this University without being as thoroughly equipped as possible for the responsibilities of practical work.

Again, there are some who, while acknowledging the great importance of biology and physics, are of opinion that the student should be sufficiently well instructed in them in the collegiate institutes, so that his attention could be at once given to medical work.

It is certainly most important that the elementary part of these sciences should be taught in our high schools; but the knowledge required by a medical student is much more extensive than could, in ordinary circumstances, be given in our institutes. The apparatus is very expensive, and no such school could afford to employ a teacher who devoted his whole time to one of these branches. It is, therefore, not possible for the student to obtain the necessary education in the preparatory schools.

In the department of chemistry the same marked improvement has been made during the last few years. The subject of organic chemistry is growing in importance from year to year. It is now evident that the further advance of the science of medicine will be along the line of organic chemistry.

The public are not sufficiently alive to the importance of having a well-educated profession.

When a member of a family is seized with a severe illness, how dependent we are upon the skill, good judgment, and attention of the physician! How often the result depends on such care and skill!

Then, taking a broader view, how many of the diseases which afflict humanity are of a preventable character! How often the spread of epidemics has been prevented by the adoption of scientific measures! To be convinced of this, one has only to compare the present age with two or three centuries ago. Then plagues and pestilences sometimes swept away a third of the inhabitants of a city in a season.

As a result of bacteriological investigation, we find that consumption is a contagious disease, and that its virus may be introduced into the system in milk and other forms of food. At the recent International Medical Congress, Dr. Koch, the discoverer of the bacillus tuberculosis, made the announcement that he had found an agent which would cure the disease, but that he had not yet made sufficient experiments to allow him to publish the discovery. With such knowledge this fearful scourge will no doubt be materially lessened in the future.

Thanks to the investigations of Pasteur, the prevention of rabies is now an accomplished fact.

The use of bichloride of mercury in antiseptic surgery is the result of scientific experiment. There are thousands to-day who owe their lives to the employment of this agent.

We cannot conceive to what extent disease in the human family may be lessened or robbed of its worse features.

I will here give a quotation from a letter recently written by Prof. Huxley to the *London Times* on the subject of Medical Education, as it bears out the points which I have been endeavoring to make. "The happiness, the usefulness, the very existence of each of us may at any moment depend upon the knowledge, sagacity, and technical skill in the use of eye, ear, and hand, of a medical practitioner. Every case of sickness or injury which presents itself to him must in the first place, be the subject of an investigation, which, if it is to lead to a successful result, must be conducted according to the canons of those methods of observation and experiment, inductive and deductive reasoning, which are nowhere so amply and clearly exemplified as they are by the different branches of physical science; while the first three but rarely find any exercise in the province of literature.

"It would seem, therefore, to be almost a self-evident proposition that the educational training for persons who propose to enter the medical profession should be largely scientific; not merely, or even principally, because an acquaintance with the elements of physicial and biological science is absolutely essential to the comprehension of human physiology and pathology, but still more because of the value of the discipline afforded by practical work in these departments, in the process of observation and experiment, in inductive reasoning and in manipulation. But the inestimable advantages of this practical scientific education are to be obtained only at the cost of the expenditure of a great deal of time upon it. It is a delusion to suppose that listening to lectures for two or three hours a week can confer a scientific training. Such a process may instruct, it cannot educate."

From this extract it will be seen that Prof. Huxley would demand a much deeper and more extensive knowledge of the physical sciences than is yet given to medical students in this University.

While on this subject I would like to refer to an address given by Mr. Lawson Tait at the recent meeting of the British Medical Association, at Birmingham. We agree with many of the views he expressed on that occasion, and would go quite as far as when he states: "One who has to follow the craft of Surgery ought to be taught how to use his hands. I should send him so many hours in the week to the shop of the village carpenter, and I should have him trained to use a saw, a plane, and a skew, so that he should be able to make a long splint as well as to put it on, and into the blacksmith shop he should go till he knew how to strike properly with a hammer."

But when Mr. Tait undertook to criticize the teaching of physiology and anatomy in the University of Edinburgh his address gives ample evidence of a want of accurate knowledge of the subject upon which he wishes to enlighten others.

The great object of laboratory teaching is to make just such thoroughly practical men as Mr. Tait would desire. Men who not only know how, but when, to operate, as well as the reason for such proceeding.

If the character of medical education has been improved only in the primary departments, physics, chemistry, and biology, we would have great cause for congratulation.

In the final departments, medicine, surgery and obstetrics, equal advance has been made, and that in the line of practical instruction. There are critics who insinuate that by our curriculum we will turn out theoretical men, whereas if they would only examine our course of instruction they would find that all the changes made have been with the endeavor to impart a more practical and useful education. This is true in the final as well as in the primary departments. One of the first changes made after the inauguration of the teaching department in medicine was a great increase in the amount of clinical instruction given in the hospital, and thus advance was made primarily at the instance of this faculty.

During coming sessions even greater and more important improvements will be made. The gentlemen having charge of these departments are determined that nothing shall be left undone to give the student a thoroughly practical training in this, the most important part of his medical course.

Now, while we agree that clinical work is of paramount importance, we also believe that a thorough primary course is necessary, for indeed it is impossible that the former studies can be carried on with success without a previous knowledge of the latter. A movement was made last year to place the subject of pathology upon a more satisfactory basis. This, like physiology, should be taught by one who devotes his whole time to the subject. It is therefore necessary to have an endowment, which together with the students' fees, will give a salary to the professor. We hope that this endowment will shortly be forthcoming. In the University of Zurich, to which I shall again refer, there is one professor and three assistants in the pathological laboratory. In fact, in most continental universities similar facilities are offered.

The medical schools of this city have a history of which they may well be proud. More than fifty years ago the subject of medical education was taken up with enthusiasm by the physicians then living, physicians who for ability and earnestness of purpose have not since been surpassed or perhaps equalled. They had, of course, to begin in a small way, but that many of them had an exalted idea of the requirements for medical education is amply shown by the establishment at that early day of a medical faculty in connection with King's College. From motives which we probably at this day do not understand, and will not therefore try to explain, this medical faculty was abolished after a few years' existence. That good work was done during those few years is evidenced by the number of beautiful specimens now in the museum, and students have ever since derived great benefit from the establishment of that faculty, in listening to the excellent lectures of Dr. Richardson, who was the professor of anatomy, and who no doubt during those few years of work performed exclusively in this one branch, acquired that marvellous facility for imparting instruction on an important and difficult subject.

From that time onwards the medical schools had to rely for their support entirely upon the students' fees. Their success under such circumstances depended on the energy, industry, and self-sacrifice of those gentlemen who were engaged in giving instruction. The education given was excellent in character and well up to the standards then existing. However, within the last fifteen or twenty years great changes have taken place in the teaching, both of the primary and final branches, changes which required the expenditure of large sums of money for buildings, equipment of laboratories, and for the endowment of chairs in special departments, chairs which could only be occupied by men who make the study of their subject their whole life work. These changes were being provided for both in Europe and America either by government or by private endowment. The University of Edinburgh erected an immense structure in which laboratories were provided for the various branches requiring them.

In Paris, similar large buildings were dedicated to scientific work in connection with medicine.

The medical colleges attached to the London hospitals took up the same work, and every German University, even to the smallest which possessed a medical faculty, had their laboratories for practical work, as well as professors who received a salary from the State. Some of these are on a scale of magnificence altogether beyond those of English schools.

On this continent a similar work was taken up by many of the universities of the United States. To some, as the Universities of Michigan and California, state aid was given. The sum of eighty thousand dollars was last year given by the state of California to the medical faculty of its university.

The Johns Hopkins University, the College of Physicians and Surgeons of New York, as well as other medical colleges, received large donations from private individuals for the same purpose.

The College of Physicians and Surgeons of New York received over half a million dollars from the Vanderbilt estate, and Mr. Carnegie built a laboratory in immediate proximity to Bellevue Hospital.

In our own country the medical department of McGill University, of Montreal, received the handsome sum of one hundred thousand dollars.

Under these circumstances it became evident that some action must be taken, or else there was great danger that our medical schools here would fall in the rear of those of other cities. The urgent necessity for funds did not seem to be appreciated by the wealthy men here as in Montreal, nor did there seem much prospect of receiving government aid.

Fortunately, just at that time changes were about to be made in the whole of the working of this University. Federation with other universities of the province was about to be established, and it occurred to some that the facilities for the study of biology, chemistry, and physics, which had necessarily to be made for the carrying out of the federation scheme, could quite as easily be made use of in the study of medicine.

In this way the whole question of the erection of buildings, of the procuring of expensive apparatus, and the engaging of special professors, would be at once solved. The matter was laid before the Minister of Education, who appreciating the state of affairs had inserted in the University Bill a provision for the formation of a medical faculty. Offers were made by the Senate to the two medical schools then existing to combine in the formation of a faculty. This offer was refused by one and accepted by the other.

As an evidence that the arrangement was entered into on the part of the Toronto School of Medicine, without any idea of pecuniary gain, the majority of the lecturers accepted salaries less than they were before receiving. A large proportion of the fees of each year goes to the University to indemnify it for any expense, and to provide for increased facilities for the students.

We often hear the statement made that our medical schools have been very efficient, and there is no necessity for outside aid. As a proof of this, the assertion is constantly reiterated that our graduates who proceed to England easily carry off the highest honors. Now, supposing this assertion to be quite correct, is it likely that in future graduates from our schools here will continue to take the same high standard in England, if we allow ourselves to fall far behind the old country colleges in the providing of educational facilities? Having so frequently seen this statement made that Canadian graduates carry off easily the highest honors in Great Britain, it occurred to me to make enquiries so as to gain accurate information on this point.

The University Degrees in Medicine are among the highest honors which English students can obtain. These degrees cannot without great difficulty be sought for by students who graduate here, as they would have to go through a certain lengthy prescribed course. These are therefore out of the question in the great majority of cases. The other honor examinations of importance are those for membership of the Royal College of Physicians and the fellowship of the Royal College of Surgeons.

Now what is the record of Canadian graduates in these examinations? Before the Royal College of Physicians during the past twenty years only one Canadian, Dr. Osler, of Baltimore, has succeeded in passing for membership. Sir James Grant, of Ottawa, passed previous to 1870.

Before the Royal College of Surgeons, during the past twenty years, seven Canadians have attempted the first fellowship examination and of these four succeeded in passing. Only two of those who passed the first entered for the final, and these succeeded in passing.

Thus during the last twenty years only one Canadian graduate passed the highest honor examination of the Royal College of Physicians, and only two passed the corresponding examination before the Royal College of Surgeons. Can it then be said with truthfulness that Canadian graduates have easily carried off the highest honors in England?

The examination for Licentiate before the College of Physicians, and that for membership of the College of Surgeons, although thorough and efficient, cannot be properly considered as honor examinations. They are simply those necessary for the London student to pass in order to obtain his license to practise.

A number of Canadian graduates have gone up for these examinations, and have succeeded in passing them. By doing so they have not taken higher honors than they obtained by passing for license here before the College of Physicians and Surgeons of Ontario.

We cannot, therefore, flatter ourselves that we have educated a class of students who, when they went to England, carried off easily the highest honors, nor can we adduce that as an argument for our remaining as we are, content with our present position.

If this has been the case in the past, how much more in the future will this unfavorable comparison exist between the Canadian and English graduate if we do not afford the same facilities on this side of the Atlantic as are to be found on the other?

Although I am careful to emphasize the fact that the Medical Faculty of this University is self-sustaining, I do not wish it to be understood that I am opposed to the granting of State aid for the furthering of medical education. For centuries past a medical faculty has been considered necessary to a fully-equipped university. The reason is obvious. Many of the subjects taken by medical students in the first part of their course are purely of a scientific character, and are of equal importance to the Arts students. Then again some medical subjects, as human anatomy and physiology, are now in a general way considered necessary to a liberal education. These could not be taught unless there is a teaching faculty in medicine.

In Europe, the ridiculous doctrine that public money should not be given to the furtherance of scientific and professional education does not prevail.

In this province public funds are provided for schools in agriculture and civil engineering, and at one time in veterinary medicine. Why the health and welfare of horses and cattle should have been considered of so much more importance than that of human beings is not easy to see.

I would like here to refer to the University of Zurich as an example which we ought to some extent follow. It was established on its present basis in 1864, with five faculties.

It now receives from the Canton of Zurich about $50,000 per annum, although there are but 200,000 people in the whole Canton. Fancy, if such a stretch of imagination were possible, that the people of the city of Toronto, now about 200,000, give $50,000 a year to the University, and you will have some idea of the liberality of these enterprising Swiss.

Now the Swiss people are not distinguished for excessive generosity, but they are noted for the care and shrewdness with which they invest their savings. They give this $50,000 a year because it is a good investment, and they are not mistaken.

Of the three hundred students who attend the medical lectures, two hundred come from beyond the bounds of the Canton, from all parts of the world—thus bringing wealth and influence to Zurich. The same proportion of foreign students attend in the other departments, adding at least two thousand to the population of the city.

As an effect of this university, and the technical schools in connection with it, the people are becoming noted for their intelligence, skill, and enterprise. Factories and chemical works have been established in various parts of the country, so that the amount of wealth which pours into that little Canton is now enormous.

The old saying that "knowledge is power," although generally acquiesced in, is not acted upon to the extent it should be.

It must be remembered that in the Zurich University the medical faculty receives its proportionate share from the State. The pathological, physiological, and physical, laboratories are most complete, and each possesses an endowed chair.

The University of Paris, which has, during the last fifteen years, received five million dollars from the city for new buildings, devoted a large portion of that sum to the medical department.

I could in the same way enumerate nearly all of the universities of Europe, for they are in a similar position with regard to their medical faculties.

Now it may be argued that in this comparatively new country, where there are so many demands made upon the treasury for its development, funds should not be granted for the education of students in the practical or final branches, as surgery, medicine, and obstetrics. It is, however, of the greatest importance that the public should have skilful medical attendants, thoroughly educated up to the best standard at present existing. We have shown that it is impossible to give the necessary instruction in the more scientific branches—anatomy, physiology, chemistry, physics, and pathology—without an endowment It therefore seems but just and right that this aid should come from the State.

There are gentlemen before me, who having decided to take up the medical profession, are now entering upon the first session. To these, as well as to those who have already completed a portion of their allotted term for study, I would like to say a few words. It is possible that you may hear from one who has taken the same course in the same university, something that may be of interest to you.

Twenty-five years ago I listened to my first medical lectures, given by Dr. Richardson in the old Toronto School of Medicine, which then occupied the site on which this truly magnificent edifice now stands. Old students will remember the dingy lecture room, with its beautifully carved seats—carved by the penknives of the students. They will also remember the peculiar musty odor, which arose principally from decaying wood, and partly, I am afraid, from a badly ventilated dissecting-room.

We have now in its place this beautiful Biological building, so complete in all its appointments that we can confidently claim it to be second to none on this continent, and, as far as I know, to none in Europe.

If such changes are brought about in a quarter of a century, what may we expect by the end of another twenty-five years?

The fact of you being here is an evidence that you have thoroughly made up your minds as to the calling you wish to pursue. It would, therefore, be useless for me to speak of the advantages or disadvantages of the medical profession. That there are both everyone will admit. But he who practices medicine for the love of it will always find sufficient to absorb his whole attention, and to make him forget the many vexatious disappointments which are necessarily connected with it.

In your course you may be required to study certain branches which you may at first glance consider useless. Do not slight them on this account. Remember that these subjects have been placed in the curriculum by men of experience, men who have found out of them use in after life.

At the commencement of your course you will find it of advantage to cultivate the habit of working in an even and regular way.

Students, particularly those of the freshmen year, have many of them been in the habit of spending the first half-session in comparative idleness hoping to make up for the lost time in the second-half. Remember that lost time can never be made up. Commence to work a certain number of hours each day, allowing sufficient time for rest and recreation. Continue this plan throughout the session and you will not find it necessary to spend whole nights in useless cramming, but you will go up to your examinations with a clear head and a steady hand—two most important requisites for success.

Do not expect to obtain all, or even a major part, of your knowledge out of books. A great deal of the reading done by students is to no purpose. Whenever possible, try to have some object when you are reading descriptions. For instance, do not as a rule read anatomy unless you have before you that about which you are reading.

Remember that the hand, the eye, and the ear, require special training, and that this education can only be obtained by actual use.

Cultivate powers of close observation. It is astonishing how much passes before our minds as medical men every day which we do not really observe. This has always been the case.

The wards of two of the largest hospitals of Paris have for years been filled with patients suffering from most wonderful and varied forms of nervous disease, but the whole subject of neurology was more or less in a state of chaos until Dr. Charcot published to the world the results of his careful studies of these cases. Men of great ability had preceded Charcot, but they apparently did not possess the same powers of observation.

The constant study of medicine is sometimes a little wearisome, and it is often advisable for a student to take up some favorite work outside of medicine, to which he may devote an hour or two each day.

There are so many branches of general education which will be of assistance to the practising physician; for instance, sketching, modern languages, general literature, etc. A student might take up one of these if he has time, but should make it quite secondary to that of medicine.

We are life-long students of men, of their character, habits of life, disposition, occupation, and ailments. Any kind of knowledge which will throw light upon our future pathway will therefore be of service to us.

There is another point I would wish particularly to emphasize, viz.: Thoroughness in all the work done. I would have the word "thoroughness" placed in some prominent position in every student's room, so that he would see it morning, noon, and night. It is not only necessary that we should be thorough in our work as students, but we should not forget it in after practice. Many mistakes are made in diagnosis, not from want of knowledge, but from want of thoroughness in the examination. It is of the greatest importance that the habit should be formed during student life, so that careless and slovenly work may be foreign to our nature.

To those who are commencing their [illegible] year, and who will be engaged for the first time in clinical work, a few remarks may not be out of place.

You will be taken to the bedside of patients in the hospital in order that you may acquire an intimate and practical knowledge of the various diseases to which the human body is liable. You will frequently have the advantage, not only of seeing the physician examine and prescribe for patients and of hearing the remarks made, but you will have the opportunity of making examinations yourself. Please remember that the patient submits voluntarily to such examination, and that the greatest care should be taken to speak and act so as not in the slightest way to injure his feelings. Patients in hospitals have a weary life at best, and if we can do anything to brighten their condition we should not fail to do it.

Instances are not infrequent where the attention of a thoughtful and cheerful student has been of great benefit to the patient, while the student himself has obtained the information sought for more easily and in a more perfect way.

You will find by becoming acquainted with patients and taking an interest in their general condition, you will have no difficulty in making examinations.

In practical life, next to a good knowledge of your work, it is necessary to cultivate the habit of taking a deep interest in the welfare of your patients. If a sick person feels that he has not only a skillful physician but one who is taking an intense interest in his case, he will have a more contented mind and will be more likely to recover. This habit you may commence to cultivate in the hospital.

I would like on this, the commencement day of your career in medicine, to give you some motto which will sum up in one sentence all necessary advice and will act as a guiding star in your future life. Where can I better find this than in the sacred writings in which we seek for counsel in our doubts and difficulties? Could I do better than ask you to remember and ever act upon these expressive words of Micah—"What doth the Lord require of thee but to do justly, to love mercy, and to walk humbly with thy God?"

ADDRESS BY PROF. RAMSAY WRIGHT.

Professor Ramsay Wright, who was then called upon, expressed great gratification at the

views entertained by Professor Graham on preliminary medical education. He had visited during the summer some twelve of the more important European universities in company with Professor Osler, of Baltimore, and although his object was chiefly the study of the newer museums of natural history, he had had various other educational topics brought under his notice.

He referred to the instructive teaching collections in the natural history museums of London and Berlin as exemplifying the kind of arrangement which would be adopted in the new biological museum.

In confirmation of the wisdom of the recent changes in the history of the University of Toronto, he adduced the present position of the university question in London and France, stating that within a short time it is expected that London University will become a teaching body, and that the former isolation of the "faculties" in France will probably soon be remedied by grouping them into universities.

He attributed much of the recent progress of the biological sciences to the enlightened policy of State assistance to the scientific side of medical education, and called attention to the fact that these disciplines, which were at one time treated entirely as preliminary to the study of medicine, now rank equal with the other subjects of the philosophical faculty as a means of mental training.

The English universities have adapted themselves to modern requirements in this way, and include in the arts curriculum not only physics but also chemistry, and the various branches of biology, including anatomy and physiology.

Pathology and therapeutics remain as the special branches for cultivation within the medical faculty. On them the art of medicine is founded, but they themselves rest on the fundamental sciences of the primary course.

Professor Wright counselled the first-year students, therefore, to devote themselves to physics, chemistry, and biology, as affording the best foundation for their future studies. He also further counselled them to cultivate friendships outside their own faculty, so that the undergraduate life of the university might be thus cemented into a harmonious whole.

NOTE ON THE DIAGNOSIS, BY MEANS OF THE MICROSCOPE, OF PAGET'S DISEASE OF THE NIPPLE AND BREAST.

BY DR. A. B. MACALLUM,

Lecturer in Physiology, University of Toronto.

In Paget's disease the carcinomatous condition of the breast is generally supposed to follow on a long-standing affection of the surface of the nipple, which is comparable in certain respects to chronic eczema, but which, on histological examination, presents characters not observable in the latter trouble. As the usual methods of treatment for eczema are useless here, it is of importance at the outset to determine whether the case in hand is ordinary eczema or the disease in question. The ordinary methods of diagnosis have been hitherto purely clinical; the long duration of the supposedly eczematous condition, the infrequent itching, the feel of the nipple like a coin under a cloth, etc. Recently Darier and Wickham have proposed a new test,* which, on account of its easy application, may diminish the importance of the other means of diagnosis. It depends on the occurrence inside the epithelial cells in the affected part of peculiar elements, which are considered by these observers as parasitic sporozoa (or psorospermiæ) and the condition of the nipple is, accordingly, from their point of view, a case of psorospermosis. The bodies are usually found in, but not confined to, the lower layers of the epidermis, in the "eczematous" part, and they may be observed in the cells filling up the galactophorous ducts. They are usually large, and they may, according to Darier, measure from one-third to even one-half the stratum mucosum of the epidermis where they are placed. If now, one of the small crusts or scabs from the diseased nipple, examined with appropriate methods of preparation under the microscope, should be found to contain the bodies in question in greater or less abundance, the diagnosis of Paget's disease is, these authors claim, established.

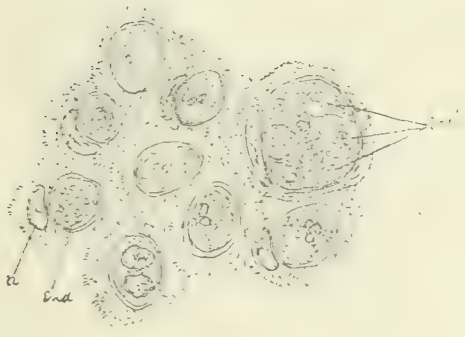
*Darier, *Comptes Rendus de la Societe de Biologie de Paris* of the 13th ..., 1890.

Wickham—*Archiv de Medicine Experimentale*, January, 1890; his monograph, *Maladie de la Peau dite, Maladie de Paget*, Masson, Paris, 1890.

See also Prof. R. Ramsay Wright's lecture on Sporozoæ, PRACTITIONER, January, 1890.

I have had two cases of Paget's disease of the breast for examination, and from one case—that of Dr. Burt's, of Paris, Ont.,—I made a large number of sections, which furnished all the material necessary for a full study of these bodies. In the second case, which was under the care of Dr. Primrose, in the Toronto General Hospital, I had a privilege of examining after Darier's method, slightly modified, the disease in the unremoved breast, and found there, as in the first case, the bodies in question. Figures 1 and 2 are drawn from preparations so made from Dr. Primrose's case.

(Fig. 1.)



(Fig. 2.)

As these structures and analogous intracellular forms in epitheliomata are likely to be the subject of a great deal of interest in the near future ; and moreover, as the views of Darier and Wickham, as to their nature, may not be endorsed by all pathologists, it is convenient to have a name for them which will express no preference for any particular theory. I have, therefore, selected the term *endocyte*,* which is both readily applicable and intelligible, and it will, I hope, serve the purpose until the question of the nature of these bodies is satisfactorily solved.

Darier's method was either to mount the crusts on the slide in water under a cover glass, and study them with a moderately high power objective, or, better, to tease out a crust on the slide in Gram's Iodine solution, and examine as before. When more or less fat is present, it is removed by placing the crust for several hours in a 10% solution of ammonia. The method which I adopted was somewhat different, and had the advantage, also, of making a permanent preparation. The crust, or a portion scraped from the nipple, was teased out in a drop of tincture of iodine on the slide, the cover glass put on, and after a couple of minutes a drop of 50% glycerine run in. The alcohol and the iodine fix the endocytes, and the iodine gives them a a brown, yellow tint, which fades slowly in glycerine. In the preparations from Dr. Primrose's patient, there were not a large number of free cells with endocytes enclosed, although forms like those of Fig. 1 were met with ; but the most unmistakable evidence of the occurrence of the endocytes was furnished by some of the unteased portions themselves (Fig. 2). Here they were readily seen with their clearly alive membrane in a great majority of the cells, whose nuclei frequently appeared pushed to one side and crescentic in outline.

In an examination of the sections made from the excised breast of the same case, there were found a large number of endocytes in the epithelial cells, covering the retracted nipple, as well as in those filling the ducts.

As already stated, endocytes are present in epitheliomata, but less abundantly ; and they have rarely the cystic membrane, and the large size found in those of Paget's Disease, and they occur, moreover, in the central cell of the "nest," which fact readily distinguishes them from those now under consideration.

I leave the question of the nature of the endocytes for discussion in a future paper.* Although not endorsing fully the views of Darier and Wickham with regard to them, I have no doubt whatever of their great value in the diagnosis of

* *Ενδον* within, and *κυτος* a vesicle = cell.

* I appear as one of the members of the Pathological Society of Toronto.

Paget's Disease, whether of the nipple or of any part of the skin.

LEGENDA OF FIGURES.

Fig. 1. *a*, *b*, *c*, *d*, *e*, examples of isolated epithelial cells with endocytes: *n*, the pushed-aside nucleus of the epithelial cell; in *b*, the endocyte has two nuclei; *end*, the endocyte *sh*, its refracting membrane; in *f*, the endocyte has undergone a process of degeneration and disintegration × 500.

Fig. 2. A group of epidermal cells with endocytes, *end*, *n*, the nucleus. In one cell there are several endocytes (*end*) present within the same membrane × 500.

WHY APOSTOLI'S METHOD SOMETIMES FAILS TO ARREST HEMORRHAGE.

BY A. LAPTHORN SMITH, M.D., M.R.C.S. ENG., LECTURER ON GYNECOLOGY IN BISHOP'S COLLEGE, MONTREAL.

As Apostoli's Method has now been applied about 40,000 times, with varying success on over 2000 reported cases, 600 of these having been under the care of Apostoli himself and the remainder under some of the ablest men of nearly every country in the world, it is about time to enquire why the success has been varying, or indeed why the method has ever failed at all to do what Apostoli has claimed that it would. One of the most decided claims which has been made for it was that it would arrest hemorrhage in every case; and as I firmly believe that it will do this in every case in which Apostoli's method is properly carried out, I think that it may be of interest to demonstrate if possible the causes of failure.

But first of all let us clearly understand what we mean by the term "Apostoli's Method." By this we mean the scientific and systematic use of the positive pole of the galvanic current in graduated doses of sufficient strength, and applied during a period of time long enough to cauterize the whole of the endometrium, or as Apostoli calls it, "*galvano-caustic positive*." As I believe that failures have been due in every case to the lack of carrying out some or all of these conditions, I had better review them one by one.

1st. It must be scientifically applied; that is to say there must be no guess work about it; no depending on the patient's impressions or the number of cells in the circuit. Some patients will make a great outcry, as if they were suffering, while no current at all is passing in the circuit, while other women will quietly endure a current of 150 milliamperes without a murmur. Then a battery which at one time will give out a current of 17 milliamperes per cell will at another time only give a current of two or three. So that applying 10 cells may mean all the way from 20 to 170 milliamperes. Therefore, unless an accurate and reliable instrument is employed to measure the current with, it cannot be said that it is applied scientifically. The strength of current necessary to cauterize, varies in direct proportion to the amount of surface over which it is spread out. Martin, of Chicago, has ascertained by experiment that a current of 25 milliamperes traversing a positive platinum electrode of one square centimetre of surface pressed firmly against the mucous membrane of an hypertrophied cervix, the circuit being completed by a large abdominal electrode, will produce a dry condensed condition of the tissue beneath the surface of the plate on the membrane in five minutes.

A catheter measuring one-third of a centimetre in diameter is consequently about a whole centimetre in circumference, and for every centimetre in length of such a sound at least 25 milliamperes of current are necessary for cauterization.

What are we to do in cases where for various reasons the patient can only bear 50 or 75 milliamperes? We must simply take the precaution to expose not more than two or three centimetres in length of such a sound. If the uterine cavity is longer than that, then it must be treated in successive sections on the same or on different days. By using carbon electrodes of definite surface, we can regulate the strength of current necessary for cauterization, or by using flexible bougies covered with platinum, gold, or aluminum wire over a certain extent, of which more will be said later, the same object may be still better attained, as the higher the current which may be borne, the larger the extent of intra-uterine mucous membrane which can be dried up at a single sitting. It is

very important to leave nothing undone that will render strong currents more bearable ; this requires attention to three details. First, to have the cutaneous electrode as large and moist as possible. Thus a clay or bladder electrode measuring six by nine inches will enable the patient to bear on the skin twice as much current strength as one measuring only three by nine inches, and a nine by nine will enable her to bear three times as much as a three by nine ; and so on. Second, as the intensity at the intra-uterine electrode must be concentrated to a definite strength, namely, 25 milliamperes per square centimetre of surface, in order to be effective, it is obvious that we cannot diminish the intensity and consequent pain, without at the same time lessening the efficiency ; in other words pain at the cutaneous electrode is avoidable no matter how large the dose, while it will be present at the active or internal electrode whenever the intensity passes a certain point. This point varies, however, very much in different women in direct proportion to the degree of development of the nervous system. Some women will endure without complaining 150 milliamperes, while others, more highly nervous, will hardly endure 25. In these latter women the best thing to do is to give them a small sprinkler bottle of the A. C. E. mixture in one hand and tell them to smell it from their handkerchief doubled up in the other hand. You begin at zero and increase the dose gradually until she has become slightly under the influence of the anæsthesia but not unconscious, when she will easily bear the desired strength of current. As long as she is able to feel very much she is able to help herself to the mixture, but when her sensibility has been sufficiently dulled she will cease to put any more on her handkerchief. I feel perfectly safe in doing this even without an assistant. As soon as the maximum has been reached, the anæsthetic may be removed. I have made a great many applications in this way and have never had the slightest accident. The only inconvenience is that the patient may want to sleep on my chair for five or ten minutes afterwards. In employing this treatment on highly educated and nervous women, I feel satisfied that a little anæsthesia enables us to employ much more effective doses without any pain whatever. Thirdly, fortunately women become accustomed to the passage of the current. Besides, their sense of modesty and and sense of fear must be overcome, especially as this latter is often mistaken for pain. So that it is very important to begin this treatment with great gentleness, not exposing the patient needlessly, and proceeding very slowly until she becomes accustomed to it. I generally expect to devote two or three sittings to overcome ing their fears.

2nd. The treatment must be carried out systematically, that is at regular intervals until the bleeding has been stopped. Some patients will come once and then not return for a couple of weeks. One of the usual excuses is that they did not like to come while they were unwell ; but as some of them are unwell for twenty-five days out of thirty it is necessary to explain to them that the treatment must not be delayed for that. I generally allow them to lose for two or three days, but if the flow is very severe I stop it at once. In fact in a case of bleeding fibroid I go on with the treatment three times a week quite irrespective of menstruation, until towards the end of the treatment, when I allow the patient to have a period without interference, in order to test my work. If we could give enough current at the first application to completely destroy the whole of the endometrium and if that spongy diseased lining membrane did not return again, then one application would invariably cure the patient. But such, unfortunately, is not the case. It requires several preliminary applications in order to test the patient's endurance or tolerance. Then it takes two or three more to reach a point where it becomes effective. Then we may not be able to turn on enough current to cauterize more than a quarter of the entire surface, if we do it in sections, or to cauterize through more than a quarter of the thickness of the vascular membrane if we try to do all the surface at once. Then we know the tumor came there by reason of bad circulation (at least such is my belief) and even if we do destroy the bleeding endometrium we cannot prevent it from being reproduced one or more times, or as long as the circulation remains bad. That such is the case is proved by the return of the bleeding after the whole of the diseased surface has been removed by the curette. But

we can also be sure that after each destruction of engorged tissue a healthier skin will be produced. This is proved by the result in every one of the cases which have passed through my hands during the last two years, in not one of whom has the hemorrhage from mucous membrane ever returned. Moreover, I could see as it were the mucous membrane becoming healthier by the gradual lessening of the quantity of the flow at each period. Thus a mucous membrane which was so diseased before treatment as to allow the blood to escape during fourteen days out of thirty would, after ten treatments, only bleed seven days out of thirty, and after twenty treatments only bleed four days, and after thirty treatments only bleed three days. In most of the bleeders who have come under my care, the mucous membrane was in such a friable condition that merely passing the sound with the utmost gentleness would cause a red stream to pour forth. I will illustrate this by a case. Mrs. P., æt. 33, came under my care on Aug. 6th, 1889. Dr. H. O. Marcy, of Boston, happened to be spending a few hours with me on that day and I invited him to examine the patient for me. It was impossible to pass a uterine sound, but on introducing a flexible bougie which he did with the utmost gentleness, the blood flowed out and ran on the floor of the office before I could catch it. She gave the following history: Five years before she began to suffer from painful and excessive menstruation; in spite of all her physicians could do for her she was never longer than one or two days a month free from hemorrhage. After several months treatment she consulted a specialist, who was unable even by packing her in ice to arrest the flow. In March, 1887, she consulted two other gynecologists, who decided that nothing short of total extirpation would afford her any chance of life. She declined the operation, and plugging of the vagina was next resorted to for the next two years, frequently necessitating the calling in of a physician in the middle of the night. By this time she was so weak that she could not walk up or down stairs without assistance, but after four months treatment with galvanization, extending from August to November, she was able to do all her own housework, including washing and scrubbing, while her periods returned regularly every four weeks and lasted less than four days. At no time during the five years previously did she ever go longer than two weeks without a period, nor for the last six months before commencing the electrical treatment was she ever more than two days per month free from hemorrhage.

One of the commonest causes of failure, I believe, will be found in the neglect to apply this coagulating surface of the positive pole to the whole of the bleeding surface. And to tell the truth, with Apostoli's solid platinum sound this is in some cases not only difficult but sometimes impossible.

The uterine canal, in some cases, is so deformed in direction by the projection of the tumors into it that a sound must describe many curves before it can reach the fundus. Over and over again I have failed to introduce a uterine sound or even a small probe farther than two and a half inches, and yet the canal was found to extend to over five inches by passing a flexible bougie, so that such cases when treated by Apostoli's method with the solid platinum sound are bound to be failures, simply because the bleeding surface of the cavity of the uterus is never reached at all. I can illustrate this point by some of my most successful cases, in which the attending physician, as well as myself, had tried many times to introduce a solid sound and failed, and yet I have been able to introduce a flexible bougie and then after perhaps a dozen applications have been able to get the solid electrode in the full distance.

The two following failures, one under my own care, and one under the care of a most competent confrere, illustrate well the disadvantage of a solid electrode and the advantage of a flexible one. A Miss B., æt. 26, was sent to me for bleeding fibroid. The tumor was slightly cystic. After thirty positive applications of an average current strength of 150 milliamperes the tumor was reduced about one-sixth in size, the periods were brought down from ten to twelve days to three or four days, and the inter-menstrual period was extended from two to four weeks.

The patient had regained her health so much, that at the end of three months' treatment she was preparing to return to her home, when a

period came on, which continued for fourteen days, and she was at the same time taken with an attack of localized peritonitis over an area the size of a quarter of a dollar. I at once considered this an absolute failure, although at the time I was quite unable to account for it, and therefore advised total extirpation, which was successfully performed shortly after. On examining the tumor, which proved to be a fibro-cystic one, and upon cutting open the uterus, I found the endometrium to be perfectly healthy, but the cause of the bleeding was seen to be a tiny hole into a uterine sinus, caused by the solid, unyielding platinum sound having burned its way through the wall of the uterus. The patient is now enjoying excellent health; but this accident would never have occurred had I then possessed what I show you now, namely, a flexible sound with a non-cauterizing point.

Miss S., æt. 35; began to menstruate at 15; regular always, lasting from five to six days; at 18 began teaching and caught cold, and from that time periods became more painful. About three or four years ago the pain disappeared, and the periods became longer; bowels moved every day or so. A year ago last summer she consulted a physician on account of profuse menstrual flow, when the presence of a fibroid was suspected for the first time. Took medicine, but without much effect. On account of this she consulted Dr. Chown, just a year ago. The bleeding was so severe that at first an examination could not be made, and he was obliged to tampon vagina, and while doing so discovered fibroid. Bleeding so severe that it came away in large clots. In June she went to Minneapolis to a private hospital, where electricity was employe'. She received twelve or fifteen applications in three months. After this, periods continued to last from ten to fourteen days, but without hemorrhage, till the latter part of February, when hemorrhage returned, though not so bad as a year ago. Ergot lost its effect and upset the stomach too much. Oil of erigeron was also employed without effect. What did her most good was an herb, yarrow or millefoil.

On the 2nd and 3rd inst., she had an attack of nervousness, with an accumulation of gas, which seemed to press on heart, lasting, on and off, for three days. Then a brownish discharge from vagina came on, lasting about two or three days. Urine was pale, and flowed profusely. No obstruction to either bladder or bowels; had diarrhœa last summer.

Examination.—Tumor is a little larger than a fœtal head at full term, extending from the level of the umbilicus down half way to the pelvis. Laterally extends, on the right, from an inch of the iliac crest; and, on the left, from about two inches. The cervix is pretty far backwards, but can be reached with the finger. Tumor is slightly moveable; was unable to get either sound or probe in at all.

May 10, 1890. Tried again to-day; bougie went in 6½ inches; unable to get sound in more than 1½ in., it being arrested at interior os, which was exceedingly sensitive, the slightest pressure causing sickening pain. Gave her 25 m.m., 3 min., which she could with difficulty bear; tampon.

May 12. Sound went in 3 inches, forwards to left; 50 m.m., for 5 min.; tampon.

May 14. Douche, introduced special bougie without difficulty, and gave 35 m.m. +, for 8 min.; tampon.

May 15. 50 m.m. + for 8 minutes; no tampon.

May 16. Period came on at end of 26 days; has influenza, which she thinks brought on period sooner than it would have come; losing moderately.

May 19. Gave her up to as high as 75 m. m. +; she could stand 60 pretty well for eight to ten minutes.

May 21. Went up to 85 m. m. +; stood 70 well for 5 min.; bleeding almost ceased.

May 23. Gave current, 8 m.m. + for 10 min.; bore it more easily than positive.

May 26. For 7 min., gave 80 m. m. +, causing little pain; after application began to lose a little more freely, but stopped almost immediately.

May 28. 80 m. + for 10 minutes.

May 30. 80 m. + for 7 min.; bleeding almost stopped.

June 3. Severe pain Friday and Saturday; temperature 102°; pelvic pain; abdomen slightly tender; a few doses of antifebrine relieved her; gave her 50 m. + for 8 minutes.

June 5. Gave her 60 m. +; tampons.

Aug. 4. Period came on at the end of 28 days exactly, and lasted less than 3 days; gave her 150 m.m. + for 8 min.

This patient informs me that her doctor in Minneapolis had never been able to introduce the platinum electrode further than an inch and a half, and so, although he benefitted her generally, the diseased endometrium was never reached. I would not have had any better success with a solid sound, for there are three distinct curves in her uterine canal, which resembles the letter S. Nothing but a flexible electrode could possible enter the whole distance. It was dire necessity which compelled me to invent this flexible sound, made from aluminium wire wound closely, and a soft black gum bougie. I arranged for Messrs. Lyman & Co., of Montreal, to keep them on hand. They have the defect of not being very durable, although the one I show you has stood some forty applications. They are best preserved antiseptic, after careful washing, by standing them upright in a bottle of glycerine.

Selections.

CEREBRAL LOCALIZATION.

BY DR. DAVID FERRIER.

(In Abstract Continued.)

THE AUDITORY CENTRE.

On irritation of the superior temporal convolution and its homologues in the lower vertebrates there is quick retraction or pricking of the opposite ear, associated frequently with opening of the eyes, dilatation of the pupils, and turning of the head and eyes to the opposite side. These are just the phenomena which occur when a shrill sound is suddenly made in a monkey's ear. If the movements of the eyeball on stimulation of the occipito-angular region are to be regarded as signs of the arousal of subjective visual sensation, we have in the reactions under consideration still more characteristic indications of the arousal of subjective auditory sensation. The determination, however, of affections of hearing is not so easy as that of sight in the lower animals.

A monkey in which Ferrier performed the operation of bilateral extirpation of the superior temporal gyrus, with an interval of one month between the two operations, was specially well adapted for experimentation in regard to the sense of hearing. It was a remarkably tame dog-faced monkey, and its character and modes of behavior under different circumstances were made the subject of careful study before it was operated upon. It was a noisy talking monkey. It invariably responded when called to by name, and came immediately when called. It imitated smacking of the lips and other signs of endearment. It always shouted vigorously and loudly when anyone approached or opened the door leading down to the laboratory in which it was kept. The rustling of a paper bag, from which it was accustomed to receive sweetmeats and nuts, was the signal for vociferous cries; as also any movement of the handle of a drawer in which apples and fruits were kept. It had an insatiable appetite, and was always clamoring for food, of which it never seemed to have enough. It had also an insatiable thirst, and the sound of splashing of water, made by turning on the water-tap, caused it to shriek to be let out and put its mouth under the tap. Not a sound could be made in its vicinity, or the movement of its companion monkeys in the other cages, without exciting its active attention. It was full of fun and mischief, and in every respect an animal unusually adapted for determination of any alterations that might occur in respect of its auditory or other faculties.

The left temporal superior convolution was scraped out on October 8th. On the second day it turned its head to the dangling of keys close to its left ear, but it did not do so, or very doubtfully, to the same test applied to the right. On Nov. 5th the superior temporal gyrus of the right side was similarly exposed and scraped out. On the third day, though otherwise alert and bright, it made no reactions to sounds of any kind, did not reply to calls, did not notice the noise of footsteps on the stairs, exhibited no sign of perception when the water-tap was turned on, though it was evidently intensely thirsty, as it drank eagerly when water was presented to it; it paid no attention to the cries of two animals which were placed in the adjoining cage, and, in general, responded to none of the tests of hearing which formerly aroused its active interest. Similar results were obtained three weeks

after the operation, and this condition remained practically unchanged until the death of the animal.

Ferrier states that he has not yet been able successfully to carry out observations on animals in which the temporal lobes have been destroyed on both sides; but if, as Schafer's experiments seem to indicate, the whole of the temporal lobes, like the other cerebral lobes, may be removed without entirely abolishing reaction to sounds, we should have reason for believing, with Louget, Goltz, etc., that in monkeys, as well as lower animals, a crude and simple form of auditory sensation is still possible through the agency of the lower centres.

Luciani and Tamburini found that unilateral destruction of the upper and posterior part of the third external convolution in dogs caused deafness in both ears, but to a greater extent in the ear of the opposite side. These authors believe that semi-decussation of the auditory nerves exists, similar to that of the optic nerves, and that both ears are represented in each cerebral hemisphere.

The occurrence of deafness from cerebral disease in man is unusual, owing to the extreme rarity of bilateral lesions affecting simultaneously both superior temporal gyri. There are, however, on record two important cases in which this double lesion occurred.

Shaw has recorded the case of a woman, aged 34, who, two months before her admission into his asylum, lost power in the right arm, and soon after had a sudden apoplectic seizure, resulting in loss of speech and deafness. The loss of power in the right hand speedily passed off. She became excited, incoherent, and subject to delusions. On admission she was found to be totally deaf and blind. Tactile sensibility and smell were unimpaired. She had occasional fits and ultimately died of pneumonia a year after her admission. Post mortem examination showed complete atrophy of the angular gyri and superior tempero-sphenoidal convolutions of both hemispheres. The other cranial nerves were normal in appearance, but the optic nerves showed increase of the connective tissue septa, atrophy of the nerve fibres, and spaces filled with a colloid material. Whether the blindness was due to the lesion of the angular gyri alone, or to the degenerative changes in the optic nerves, is a question; but the sudden onset of deafness in this case, coincidently with symptoms of cerebral lesion and the condition of the brain post mortem, point to the destruction of the superior tempero-sphenoidal convolutions as its cause.

A similar case has been reported by Wernicke and Friedlander.

The affections of hearing with which we are most familiar in connection with cerebral disease are the various forms of what is called "word-deafness"—a condition in which auditory ideation is impaired more particularly as regards the association of articulate sounds with acts of articulation and things signified. The word-deaf is not devoid of auditory sensation, for he can hear the ticking of a watch, and can recognize and hum an air, but articulate sounds, except perhaps his own name or some simple combination of words, have no meaning, and cannot be repeated. Word-deafness has been found associated with affection of the superior temporal gyrus in the left hemisphere. Seppili finds that in seventeen cases in which a post mortem examination was made, in every one there was lesion of the superior tempero-sphenoidal convolution, and twelve in which also the second or middle convolution was involved.

Of twenty-five cases of word-deafness, in all, except one, there was obvious lesion of the superior temporal convolution.

Further confirmation of the localization of the auditory centre in this convolution is afforded by cases of auditory discharges or subjective auditory sensations in connection with irritative lesions implicating the gyrus. Gowers has reported two cases of this nature. In one a tumor affecting the superior temporal convolution caused convulsions commencing with an auditory aura referred to the opposite ear. In the other a tumor affecting the superior temporal gyrus caused unilateral convolutions, preceded by a loud noise, as of machinery; and Hughes Bennett has reported several cases of auditory sensory discharges, followed by temporary loss of hearing in the opposite ear, or in both.

The facts of human pathology, therefore, undoubtedly support the view that the sense of hearing is localized in the temporal lobe, and

more particularly in the superior temporal gyrus of this lobe.

The experiments of Baginsky indicate that the auditory nerve is in relation with the auditory centre of the cortex through the lower fillet of the opposite side, and thence by means of the posterior tubercle of the corpora quadrigemina and corpus geniculatum internum with the medullary tubes of the cortex. Baginsky's experiments consisted in destroying the labyrinth in rabbits, and then tracing the course of the paths of degeneration thereby caused.

We have grounds for believing that the central fibres of the auditory nerve do not, as stated by Mequert, all pass through the cerebellum on their way to the cerebral hemispheres, a hypothesis which is otherwise inconsistent with the results of destruction of the cerebellum itself. Some of the fibres of the eighth nerve undoubtedly pass into the cerebellum, but there appears to be the vestibular fibres from the semi-circular canals, and not the cochlear or true nerve of hearing.

CENTRES OF TACTILE SENSIBILITY.

It is universally admitted, since the classical experiments of Brown-Sequard that, with the exception, perhaps, of the so-called muscular sense, the paths of all the other forms of sensibility are conveyed upwards on the opposite side of the spinal cord. But, neither experimental, nor pathological, nor microscopical investigation has accurately determined in which particular part of the opposite side of the spinal cord the sensory tracts ascend to the brain.

Ferrier has lately performed an experiment on a monkey in which he divided the convex or outer half of the lateral column, in the middle of the dorsal region. Though a slight amount of paralysis occurred on the limb of the same side, there was no impairment of tactile or painful sensibility on the opposite leg the day after the lesion. The slightest touch on either limb immediately attracted the animal's attention. In another, in which he divided the greater portion of one-half of the cord, excluding the posterior column, part of the anterior column, and that portion of the lateral column lying in the angle formed by the anterior and posterior cornua, there was almost complete motor paralysis on the leg of the same side, but sensibility was not abolished on the opposite side. Whether sensation was at all impaired could not be determined with certainty, but the sense of pain was undoubtedly retained.

These experiments are, therefore, opposed to the hypothesis that the antero-lateral tract is the path either of tactile or painful sensation.

In another experiment on a monkey, Ferrier divided the whole of the left side of the cord, with the exception of the anterior and posterior median column. Though the greater portion of the left posterior median column, and the whole of the right posterior median column, as well as the grey matter on the right side, and that surrounding the central canal on the left side, were intact, there was complete anæsthesia and analgesia on the opposite side of the body. This experiment, therefore, negatives the hypothesis that the posterior columns are the paths of tactile sensibility. It also is opposed to the hypothesis that the posterior median column is the path of the so-called muscular sense on the same side.

In another experiment, Ferrier endeavored to accurately divide the posterior median columns in the mid-dorsal region. Though the animal was for a few hours somewhat weak or awkward in its hind extremities next day, not the slightest impairment of tactile or muscular sense could be discovered.

Ferrier concludes that the evidence, from the various facts mentioned, is in favor of the view that the whole of the sensory paths pass up the opposite side of the spinal cord, and that they are not contained either in the posterior median column, or in the direct cerebellar tract, or in the antero-lateral tract ; and as the pyramidal tract may be entirely sclerosed without any affection of sensation, we are led by a process of exclusion to suppose that the sensory tracts ascend in immediate relation with the central grey matter. If the sensory tract retains constant relation with the grey matter, this would account for their non-degeneration upwards like the other continuous apparent tracts of the cord.

Followed upwards in their course to the brain, clinical and pathological investigation would appear to show that in the medulla and pons the sensory tracts run in the fillet, or formatio reticularis. Higher up, the evidence is in favor

of the continuation of these tracts in the tegumentum of the crus cerebri, and thence into the posterior part of the internal capsule, whence they radiate outward, according to Fletchsig, and distribute themselves to the cortex in the region lying between the fissure of Rolando and the occipital lobe.

That the sensory tracts lie distinct from the motor in the posterior division (or rather posterior third of the posterior segment) of the internal capsule, has been amply proved by experiments and by researches on cerebral hemianæsthesia occurring in man. The sensory tracts being admittedly distinct from the motor in the internal capsule, the question then arises whether these, which up to this point have maintained their separate position, fuse in the cortex with the motor, as some believe, or are distributed to a special region.

In Ferrier's earlier researches, facts pointed to the hippocampal region as being the centre of common sensibility, and, therefore, experiments were devised to reach and destroy this region by itself.

Tactile sensibility was in every case impaired or abolished, in proportion to the destruction of the hippocampal and inferior temporal region. But it was established that a very extensive lesion might be made in one or both hippocampal regions without producing permanent anæsthesia.

The gradual diminution of the anæsthesia, at first induced by extensive, if not complete, removal of the hippocampal region, led Ferrier to suggest similar experiments on the gyrus fornicatus, or the ground that the tactile centre might extend into the rest of the falciform lobe, of which the hippocampal region was only apart. This originated the experiments of Horsley and Schafer on the gyrus fornicatus, which proved the accuracy of Broca's anatomical views as to the unity of the falciform lobe, and demonstrated that lesions of the gyrus fornicatus caused similar symptoms to those produced by destruction of the hippocampal region, of perhaps even greater intensity and longer duration.

It is not unlikely that, besides representing sensibility of the opposite side of the body generally, certain parts of the falciform lobe may represent more particularly the sensibility of special regions. But evidence is, so far, not conclusive of the existence of any altogether-specialized centres in this general area.

It has not yet been found possible to produce total persistent loss of all forms of tactile and common sensation on the opposite side of the destructive lesions of the falciform lobe, but this may be due to the fact that this lobe has never been absolutely destroyed throughout its whole extent. It is probable, however, that common sensibility may, to some extent at least, be bilaterally represented, so that a certain amount of compensation may be effected by the falciform lobe of the other hemisphere.

No scheme of the cortical distribution of the sensory tracts can be admitted as correct which does not connect them with the cortex of the callosal and hippocampal convolutions.

OLFACTORY AND GUSTATORY CENTRES.

The position of the olfactory centre, or at least its principal portion, may, with great probability, be inferred from the cortical connections of the olfactory tract, altogether apart from physiological experiment.. The connection of the olfactory tract, by means of its inner and outer root, with the anterior and posterior extremities of the falciform lobe, have been compared by Broca to a tennis racquet, of which the circumference is formed by the falciform lobe and the handle by the olfactory tract and bulb.

Broca divides all animals into two classes. First, the "osmatics," a class which includes the great majority of mammals; and secondly, "anosmatics," in which the sense of smell is relatively feebly developed. In osmatics, the olfactory tract and bulb are large, and the hippocampal lobule in particular attains extraordinary proportions, and in some animals constitutes the greater part of the cerebral hemisphere.

In anosmatics, the hippocampal lobule is relatively small in those such as man and monkey, in which the sense of smell, though good, is subordinate to other sensory faculties; while in the balænidæ, it is greatly reduced, and in the delphnidæ is almost entirely wanting. The posterior boundary of the hippocampal lobule is clearly indicated in the osmatics by an annectant gyrus, which interupts the continuity of the limbic fissure and unites the lobule with the parieto-temporal part of the hemisphere.

The effects of electrical irritation of the hippocampal lobule in the monkey and other animals are such as may be most reasonably interpreted as indicative of subjective olfactory sensation, namely, a peculiar torsion of the lip and nostril on the same side. Occasionally, however, the reaction is bilateral, and especially so in rabbits. It is an exceedingly difficult thing to determine whether smell is lost by destruction of the same region. Ferrier has found it very difficult to determine the appreciation of odors by monkeys from any outward signs of like or dislike. To most, what we consider very disagreeable odors, mixed with their food, they seem perfectly indifferent. The only odor which they seem uniformly to dislike is aloes. Ferrier, therefore, almost exclusively used aloes to test both the smell and taste of these animals.

Munk observed that in a dog which seemed unable to discover by the sense of smell pieces of meat which were scattered before it, after death the whole of the hippocampal gyrus on each side was found converted into a thin-walled transparent cyst, full of fluid. The hippocampal lobules were implicated, as well as the rest of the hippocampal gyri.

Clinical and pathological evidence of the localization of the senses of smell and taste is as yet comparatively scanty. There are clinical cases which plead in favor of the direct relationship of the olfactory centres. A case has been reported in which smell was impaired on the same side as the lesion, namely, a tumor which caused erosion of the uncinate convolution, and which did not appear to have, directly at least, affected the olfactory tract.

Several cases have been recorded of olfactory, aural or crude sensations of smell, in association with lesions implicating the region of the uncinate gyrus.

The smacking of the lips and tasting movements which are sometimes observed along with crude sensations of smell—"the dreamy states" of epileptic attacks—are probably discharges of the gustatory centres ; but we have still fewer pathological facts bearing upon this point than on the situation of the olfactory centres.

THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.—" According to Dr. Petresco, who has been employing bisulphide of carbon in the treatment of typhoid fever, the difference in the mortality of cases treated in this way from that of cases treated according to more usually recognized systems is very considerable. The mixture prescribed was of the strength of two per cent., the vehicle being mint water. Of this mixture, from three to four ounces were ordered daily. The mortality of typhoid in Bucharest is generally from twenty-five to thirty-eight per cent., but under the bisulphide-of-carbon treatment, Dr. Petresco lost only ten per cent. of his cases. Even more remarkable were his results with B-naphthol, of which from forty-five to sixty grains were given per diem. Under this treatment he lost only four per cent. of the cases. Sometimes wet sheet packing was combined with the internal medication, sometimes not. He states that not only was the mortality diminished under bisulphide of carbon or B-naphthol, but that the whole course of the disease was rendered milder, and there was a remarkable immunity from serious complications."—*Lancet.*

CAMPHORIC ACID AS AN ANHIDROTIC.—*Lyon Médical* gives an abstract of an article by M. Leu, published in the *Bulletin Médical*, setting forth the results of certain trials of camphoric acid, given internally, to control the profuse sweats of phthisical patients. It was usually given at bedtime, in doses of thirty grains ; sometimes that dose was given in the afternoon and a slightly larger one in the evening. It often happened that the anhidrotic effect was not shown until the third day, but generally the effect of a single dose lasted for several days. Out of sixty-five trials on thirteen patients, sixty per cent. were completely successful, and in twenty-two per cent. the sweating was moderated. The drug is soluble without difficulty in water, but dissolves more readily in alcohol. Its taste is said not to be disagreeable. Some trials of an alcoholic solution in the form of a lotion, for localized sweating proved satisfactory.—*New York Med. Jour.*

LOCAL TREATMENT OF HERPES ZOSTER—Duhring.—My ordinary treatment is to envelope the parts as tightly as possible with a linen or cotton bandage, the inner surface of which has been dusted with starch, and then laid on so

that there is a little layer of starch next to the body; then the cloth is sewn on tightly, making a perfectly skin-fitting bandage. The relief is prodigious. Private patients come back the next day, expressing their perfect satisfaction. I never touch the dressing, leaving it on for a week. This is my sole local treatment, and has been for a great number of years, and I don't ask for anything better.—*Columbus Med. Jour.*

PATENT MEDICINES.—The following formulæ of patent and proprietary medicines we take from the *Therap. Analyst*:

Carter's Little Liver Pills.

R Podophylli, - - gr. iss.
Aloes soc., - q.s. grs. iijss.
Muc. acaciæ.
M. ft. mass in Pil. No. 12 div.
Sig. 4 to 8 at night.—*New Idea.*

Castoria.

R Senna, - ℥iv.
Manna, - - - ℥j.
Rochelle Salts, - - ℥j.
Fennel, - - - ℥iss.
Aquæ bullientis, - ℥viij.
Sugar, - - - ℥viij.
Ol. gaultheria, q.s.

M. Pour the water on the ingredients. Cover and macerate until cool, then strain and add the sugar and wintergreen.—*Ind. Pharmacist.*

FOTHERGILL'S ANTI-RHEUMATIC PILLS.—The late Dr. Fothergill used the following combination in a large proportion of his cases of chronic rheumatism:

R.—Arsenious acid 3 grains.
Powdered guaiac 3 drachms.
Powered capsicum 30 grains.
Pill of aloes and myrrh 3 drachms.

Mix and divide into 120 pills. One pill was ordered three times a day, in connection with a diet rich in fatty foods. Also, a general tonic treatment was in most cases found advisable at the outset.—*Med. News.*

NOT EVEN JOB WAS THUS TRIED.—A Gascon, ill with retention of urine, was suffering greatly, and his physician exhorted him to exercise a little of Job's patience. "Oh!" exclaimed the Gascon, "Job be ———! Job could always draw his water; I cannot!"

THE
Canadian Practitioner
A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

When a change of address occurs please promptly notify the Publishers, THE J. E. BRYANT COMPANY (*Limited*), *Bay Street.*

TORONTO, OCTOBER 16, 1890.

OPENING EXERCISES IN THE MEDICAL COLLEGES.

The medical colleges of Toronto are well filled with students who are now engaged in the routine wo k of the present session. The opening exercises in all were attended with a success that was exceedingly gratifying to the friends of the various institutions.

Dr. J. E. Graham and Professor Ramsay Wright spoke for the Medical Faculty of the University of Toronto, on the evening of October 1st, in the Biological Department, and extended a cordial welcome to the large body of students assembled. The admirable addresses of these gentlemen, were especially interesting on account of what they had to tell us about the various universities of Europe which they had visited during last summer. It was a great source of satisfaction to the many friends of the University to learn that we are working in the lines of the best universities of the old and new world in both a scientific and practical way

Dr. Charles Sheard delivered the opening address for Trinity Medical College. The Doctor is deservedly popular with the students, and received a most enthusiastic and flattering reception from them. The prospects for the college are bright, and there is likely to be a large attendance.

Dr. J. T. Duncan delivered an excellent address to the students of the Woman's Medical College. The doctor has been a staunch friend of this College since its inauguration, and by his great ability and sterling worth has done much to place it on a substantial basis. There was unusual interest attached to this

year's proceedings on account of the unveiling of a portrait of the able and worthy founder of the School. Dr. Barrett was one of the most noble men the profession of this country has ever seen. His untiring and generous efforts gave this institution a status, and although he met with many discouragements, it was very gratifying to him to know before his death that its success was assured. We are pleased beyond expression to see that his work has been fully appreciated, and will be remembered as long as the College has an existence, which we hope will be until the end of time. The present dean, Dr. Nevitt, was one of Dr. Barrett's special favorites, and all are pleased that he has shown himself such an able successor to so distinguished a man. We are not particularly enthusiastic about the creation of female doctors, but we must give "honor to whom honor is due."

The medical schools of Toronto, of other parts of Ontario, and the Dominion as a whole, are doing good work and are a credit to Canada. They show a desire to advance with the times, and are fairly successful in their efforts. The requirements for a fairly good preliminary education and a full course of four sessions have given our Colleges a standing which is fully recognized in all parts of the world.

Meeting of Medical Societies.

MEETING OF AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

The annual meeting of the American Association of Obstetricians and Gynæcologists took place in Philadelphia on the 16th, 17th, and 18th of September, 1890. This society has for its object the discussion of the kindred subjects of obstetrics, diseases of women, and abdominal surgery. The first portion of the programme was confined to obstetrical subjects, and the remainder to gynæcology and abdominal surgery, in relation to the new advances in the treatment of obstruction of the ureter, intestinal diseases, diseases of the gall bladder, and peritonitis. The chair was taken by the president, Dr. E. E. Montgomery, of Philadelphia. The very efficient secretary, Dr. W. W. Potter, of Buffalo, was in his place, and to his faultless arrangements much of the success of the meeting was due. Everything proceeded with clock-like regularity. Among those present, memory serves to mention the following:—Drs. E. E. Montgomery, J. Price, Baldy, and Hoffman, Philadelphia; Dr. W. W. Potter, Buffalo; Dr. Rohe, Baltimore; Drs. Van der Veer and Townsend, Albany; Drs. A. H. Wright and J. F. W. Ross, Toronto; Drs. Reed and Hall, Cincinnatti; Dr. Davis, Birmingham, Ala.; Dr. Seymour, Troy, N. Y.; Dr. Weider, Pittsburg, Pa.; and others.

The discussions on many important matters connected with abdominal surgery were especially valuable. Dr. Van der Veer, with commendable courage, read reports of some very interesting cases, on which he invited criticism. The paper was not, as many papers are, a record of easy successes or of difficult cases with successful recoveries, but a record, faithfully prepared, of cases operated upon as a last resort after many delays, some with fatal termination, some with successful termination, and some with partially successful termination. One case recorded of artificially-established intestinal anastomosis is an addition to the records of the history of intestinal surgery that should encourage other workers in the same field. The patient died subsequently, but the intestines were found completely united, although a contraction had occurred at the artificial opening. If any one is sceptical as to the kind of union that will occur between the ends of resected intestine, he has but to visit the Army Medical Museum in Washington, and examine the specimen presented by Dr. Halstead, now of Johns Hopkins Hospital. Union is so complete that the scar cannot be discovered except by most careful examination.

Another paper of particular interest was that presented by Dr. Hall, of Cincinnati, on removal of an impacted calculus from the ureter by combined abdominal and lumbar incision. The stone, after giving rise to symptoms of paroxysmal pain for three years, was discovered after making an exploratory incision, and was removed through secondary incision in the loin. The point of greatest interest was the cause of the pain. The stone was bean-shaped, and at the hilum a small slit existed through which, when clear and free from mucus, the urine trick-

led, but through which the urine could not find its way if blocked. This blocked condition produced a distention of the ureter and pelvis above the obstruction and gave rise to the pain.

The specimens shown by Dr. Joseph Price were of very great interest. Myomata sloughing, as a result of electrolytic puncture, were shown. Dr. Price showed many specimens and plates of pyosalpinx, matted ovaries and tubes, from patients in whose pelvis electricity had been given a fair trial by the most skilled electrical operators. He thought that if these electricians knew more of gynæcology and less of electricity the patients would be better off. A veil of mystery had been thrown around the use of electricity, and before a man was looked upon as fit to use it he must spend half a lifetime in his preliminary education. The general consensus of opinion was that the result of electrical treatment were disappointing, and that the cases came into the hands of the abdominal surgeon eventually; that electricity is a good caustic; that it will temporarily relieve hemorrhage in some cases of uterine fibroids; that it is useless in tubal disease or disease of the ovaries, or in ectopic gestation. As to its power of relieving pelvic pain, not much was said. Many reported results of the use of electricity were useless, owing to the impossibility of making a correct diagnosis without opening the abdomen. A suppositious diagnosis may be made, but it is not and cannot be verified without exploratory operation. To exemplify this point, Dr. Price showed a specimen removed before many of the members in the forenoon. He thought the woman had had a miscarriage and was suffering from puerperal pyosalpinx. He would defy any member present to diagnose the case even now with the specimen in his hand. Was it pyosalpinx or was it tubal pregnancy? He then opened it with a scalpel and it proved to be a tubal pregnancy. The fœtus was easily made out.

He held that Tait's idea of rupture into the broad ligament was not correct. He had seen many cases (and the one just shown proved the fact) in which no rupture had taken place into the broad ligament, but the tube had simply gone on dilating as it does in pyosalpinx, hæmatosalpinx, and hydrosalpinx.

A discussion of the supposed virtues of the Staffordshire knot took place. A case having been mentioned in which hemorrhage had taken place after the most careful use of the knot, Dr. Price said that he had long since given up using it and had returned to the simple old knot used by many celebrated ovariotomists of the past. The simple transfixion, crossing of the ligatures, and tying in halves, would not allow bleeding any more than any other kind of knot. It was not so much the knot as the man who tied it.

There can be no doubt that hemorrhage may occur after using any kind of knot, no matter how well applied. All of the best operators have had this experience.

The question of drainage after abdominal operations was discussed. Some thought drainage should be used in every case. Others that it should be used very seldom. The general weight of opinion seemed to be that drainage should be used whenever the abdomen was washed out, where there was danger of subsequent hemorrhage from adhesions, or a thick pedicle where there was much handling of the peritoneum.

The question of the necessity of drainage after washing out a tuberculous or an inflamed peritoneum was not discussed.

The wonderful record of Dr. Joseph Price, of twenty-six consecutive abdominal hysterrectomies without a death, was presented to the meeting in an informal way.

The report will no doubt be published before long in detail. This is the best record yet published.

The question of the advisability of performing vaginal hysterrectomy for cancer was discussed, and opinion still remains divided. The statistics on both sides have not yet been collated to the satisfaction of those holding neutral ground. Many are waiting to be convinced. The main questions seem to be: 1. Do the cases live longer after (*a*) vaginal hysterrectomy, (*b*) after high or low amputation of the cervix, or (*c*) after being left practically alone, or occasionally cauterized to relieve the hemorrhage?

2. Is the suffering greater up to the time of death (*a*) if they are simply occasionally cauterized; (*b*) if the disease returns after vaginal hysterrectomy; or (*c*) if the disease returns after amputation of the cervix?

3. In how many cases can we be sure (*a*) that if the uterus is removed the surrounding struct-

ures are not already affected; (*b*) that if the cervix is removed we have not already a nodule of disease in the fundus?

These points require consideration, and were brought up in the discussion, but were not satisfactorily answered, owing to the limited data from which to draw conclusions. If these questions could be answered by the collated cases of Tait, who is opposed to any operation; of Leopold, the ardent advocate of the operation; and of Van de Warker, the advocate of high amputation, and discussed by these surgeons at an international congress, a conclusion might be arrived at satisfactory to all concerned.

The treatment advised for gunshot wounds or stabs of the abdomen was immediate exploration by abdominal section. One case was cited in which a box-car at a railway siding was used as an operating-room, the damaged intestines were immediately repaired and the boy made an excellent recovery.

Dr. M. Price related a remarkable case of gunshot wound. The ball traversed the liver, injured the intestines, and went through the kidney. He repaired the intestines, took out the liver, and with the exception of a small abscess in the kidney, the girl made a good recovery.

Dr. E. E. Montgomery, in presenting a specimen of extremely early ectopic gestation removed by operation, took occasion to state that he had altered the views expressed by him at a previous meeting regarding the advisability of using electricity during the early months of ectopic gestation. He knew from subsequent experience that it was a useless agent in such cases.

The social features of the meeting were very enjoyable. Dr. E. E. Montgomery received the Fellows at his residence on the evening of Tuesday, the 16th. A cordial invitation was extended to the Fellows to be present at a reception given by Dr. Willard, at the Art Club, to the Fellows of the Orthoepædic Association. On Wednesday evening a sumptuous banquet was given to the Fellows by the Obstetrical Society of Philadelphia. A most enjoyable evening was spent. Dr. Parrish presided.

On Thursday the newly-elected president, Dr. Adam H. Wright, of Toronto, took the chair, and, after a few appropriate remarks, adjourned the meeting *sine die*. The members returned home, to the north, south, east, and west, to gather another harvest for the next meeting a year hence.

The place of meeting has not yet been decided upon, but I feel sure that if the executive committee could be induced to select Toronto the profession at large would make their visit so pleasant that they would be willing to return to us at no distant date.

Looking critically over the proceedings, one might justly say that, while a few of the papers were not up to the average, most of them were of a high order, and evoked discussions equal to any discussions I have ever heard, either in the American Gynæcological Society, British Gynæcological Society, or those we have read from the transaction of other special societies. We were particularly struck with the results obtained in abdominal surgery in all parts of this continent. Western, northern, and southern people need go no longer to New York to have their abdomens opened, because they can have them operated upon as well, if not better, with every comfort and without incurring so much expense, much nearer home.

J. F. W. R.

Correspondence.

Editor of CANADIAN PRACTITIONER:

DEAR SIR,—It may not be inopportune for me at the present time to refer to the attitude which, by the public press, I have noticed the Local Board of Health, which is only a committee of the Council, has taken with regard to the appointment of my successor in the position of Medical Health Officer for Toronto.

From the inception of the Local Board, under the Public Health Act of 1884, it has appeared that the work to be done by it was considered as but one of the functions of the Council, and hence during all my period of office I found that it was with the greatest difficulty that I could get any matter discussed except along the lines of its possible effect upon the interests of the individual alderman whose constituent any special offender against the laws might be; nor, indeed, in many instances was it possible to obtain the Board's permission to take active steps for the removal of many flagrant nuisances, since someone's particular friend would thereby

be, in his own estimation, financially injured. Now, had the completion of the Board been composed of a fair share of medical practitioners the many questions demanding prompt action would have been considered on their merits. This, however, does not seem to be what the Council wish, since I see that by the Local Board's action in their advertising for applicants for the vacant p sition, they have ignored wholly the sub-committee of medical men who were asked to co-operate with them, although it was stated at a recent meeting of the Council that the Board would fix a time for consultation with such committee.

I can assure the medical profession that unless they take strong action in this matter their views will continue to be ignored. Some aldermen do not want an independent Board, nor, perhaps, an independent medical health officer.

WM. CANNIFF, M.A., M.R.C.S. Eng.
15 Peter St., Toronto, Oct. 10, 1890.

Book Reviews.

Cyclopedia of the Diseases of Children, Medical and Surgical. By American, British, and Canadian Authors. Edited by John M. Keating, M.D., Vol. III. J. B. Lippincott & Co., Philadelphia.

The editor is giving to the world a grand work on diseases of children. This volume is fully up to the high standard shown in the former two. Every general practitioner should have this Encyclopœdia. Part I. treats of diseases of the digestive system, under the authorship of Drs. Pepper, Booker, Jacobi, Councilman, W. J. Taylor, Ashby, Packard, Senn, and others. Part II. diseases of the genito-urinary organs; by Drs. G. H. Fowler, Tyson, Goodhart, Morris, Willard, Van der Veer, Sturgis, Keating, Kelly, and others. Part III. Surgery —Minor surgeries and emergencies in children, by Dr. Dalles; Plastic surgery, by Dr. Morton; Wounds and their complications, by Dr. T. G. Morton; Anæsthetics, by Dr. Allis. Part IV. diseases of the osseous systems, and of the joints; by Drs. Neilson, Ketch, Bradford, McEwen (Glasgow), Gibney, Roberts, Gerster, Hopkins, and others.

The editor has been fortunate in his choice of authors, and the methods of the latter in dealing with the various diseases, both medical and surgical, are admirable, and leave nothing to be desired. We have never seen any long series of monographs more uniformly scientific and practical. We think the therapeutics will be especially acceptable to the "family doctor."

Personal.

DR. REGINALD V. BRAY, son of Dr. John L. Bray, of Chatham, has located in Mooretown, Co. Lambton.

DR. GEO. S. BALFOUR, of Edinburgh, was in Toronto a couple of days early in the month, where he was entertained by Dr. Grasett and Dr. Thorburn.

DR. A. T. CARSON was at Brooklyn, at last accounts, and his condition was considered very serious. His many friends in Toronto are anxious to hear of a rally.

DR. L. MCFARLANE'S injured leg is progressing favorably, but the owner is getting tired of his Long Island College boarding-house, and hopes soon to be back to Toronto.

DR. W. R. SHAW, who, after graduating, spent three years in the hospitals of the old country and America, including Johns Hopkins of Baltimore, has located on Elm Street, Toronto.

Obituary.

DR. MATTHEWS DUNCAN—One of the ablest and best known of British obstetricians, was Dr. Matthews Duncan, of London, Eng. It was a severe shock to the medical world to learn that he had died suddenly at Baden-Baden, September 3rd, at the age of 64. Born and educated at Aberdeen, he practised and taught for many years in Edinburgh. While there he was supposed to be the favorite candidate for the chair of obstetrics in the university, but he was defeated by Dr. Russell Simpson, a nephew of Sir James Simpson, who received the professorship. Soon after this, about twelve years ago, he was appointed professor of obstetrics in St. Bartholomew's,

London, and at once he left the city that had treated him badly for his new field where his science was highly appreciated.

Births, Marriages, and Deaths.

BIRTHS.

RICHARDSON—At Victoria, B.C., on the 2nd inst., the wife of Dr. W. A. Richardson, of a son.

STARK—At 21 Carlton street, on Thursday, Sept. 25th, the wife of T. H. Stark, M.D., of a son.

GLASSFORD—At Scotland, Ont., on Tuesday, September 30th, the wife of W. J. Glassford, M.D., of a daughter.

MARRIAGES.

CLOUSE—BINGHAM—At Orillia, on August 21st, Elias Clouse, M.D., of Toronto, to Annie Bingham

RICE—SMITH—At Homer, N.Y., on August 21st, Peter J. Rice, M.D., of Nanaimo, B.C., to Winifred E. Smith.

HENDERSON—SRIGLEY—On the 27th Sept., by the Rev. J. Philp, at the residence of the bride's mother, 193 College street, J. J. Henderson, to Carrie E. Srigley, youngest daughter of the late Dr. Srigley.

RYAN—REYNOLDS—In Mount Forest, on 10th September, by the Rev. James Charlton, Mr. Thomas J. Ryan, Crown Lands Agent, Sudbury, Ont., to Dr. Helen E. Reynolds, only daughter of John Reynolds, Esq., of Mount Forest.

SMITH—GIANELLI—At St. Helen's church, on Tuesday, September 23rd, by the Rev. Dean McCann, W. Harley Smith, B.A., M.B., to Isabel, daughter of Chevalier A. M. F. Gianelli, Honorary Counsel of H.M. the King of Italy.

JONES—MORRIS—On the 2nd of October, at St. Margaret's church, by the Rev. C. J. S. Bethune, D.C.L., of Trinity College school, Port Hope, assisted by the Rev. R. Moore, rector, D. Ogden Jones, M.D., L.R.C.P., London, eldest son of Clarkson Jones, Esq., barrister, etc., to Maria Emily, daughter of Edmund Morris, Esq., of the Ontario Bank, all of Toronto.

DEATHS.

BOWN—At Brantford, on September 26th, John Young Bown, M.R.C.S.E., in his 70th year.

SISLEY—Suddenly, on the morning of Monday, the 20th Sept., Lucy Robins, beloved wife of Dr. Euston Sisley, Maple, aged 27 years.

NESBITT—At Central Island, on Sunday, Aug. 10th, Charles Hubbard Nesbitt, dearly beloved son of Dr. W. Beattie and Clara L. Nesbitt, aged 10 months.

Miscellaneous.

PHARMACEUTICAL EXHIBIT.

We were very much pleased to see the magnificent exhibit of pharmaceutical preparations made by Messrs. Parke, Davis & Co., at the late Industrial Exhibition, in Toronto. This firm, which have gained for themselves a world-wide reputation for the excellence of the medicinal articles manufactured by them at their main establishment in Detroit, have lately determined to extend their manufacturing business into Canada, and to this end they have erected a large and complete laboratory in Walkerville, Ontario, on the opposite side of the river from their home manufactory. Here they propose to manufacture all the standard medicinal products and fine pharmaceutical specialties for which their Detroit establishment is so famous, and we believe the machinery and apparatus which they have erected for this purpose are of the newest and completest kind. Their exhibit in Toronto was a very large and handsome one. It seemed to comprise every known drug, both in its manufactured state and as fully prepared for medicinal use; and in gazing at it one could only be filled with astonishment at the multiplicity of the resources which lie at the command of the skilful physician in battling with disease. We cordially extend to this enterprising firm a hearty welcome to Canadian soil, and trust that their venture may prove to be a profitable one. And on their behalf we bespeak from our readers a careful examination of the merits of their preparations as these from time to time shall be presented to them.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, - - THE J. E. BRYANT COMPANY (Limited), 58 Bay Street.

TORONTO, NOVEMBER 1, 1890.

Original Communications.

PUERPERAL ECLAMPSIA, WITH REPORT OF A CASE.*

BY GEO. ACHESON, M.A., M.B. (TOR.).

Lecturer on Pathology and Director of the Microscopical Laboratory, Woman's Medical College, Toronto.

"An attack of puerperal convulsions is one of the most frightful accidents that can happen to a patient under labor," so says Ramsbotham; and, as it is a disease which should be interesting to the general practitioner, no less than to the specialist in obstetrics, both on account of its dangerous character, sudden nature of its symptoms, and not infrequent occurrence, I need offer no apology for bringing the subject before you; though it is not my intention to discuss it in all its bearings, but only to make a few remarks on its ætiology, pathology, and treatment, and to report a case which recently fell under my observation. I am very glad to know that the discussion is to be opened by a gentleman so well qualified to speak with authority on this subject, as Dr. A. H. Wright, and I hope he will be followed by many who have had extensive clinical experience; so that by a free interchange of views, especially on treatment, we may all learn much that will be valuable to ourselves and useful to our patients.

Lusk says, that one in eight of all deaths among pregnant women is due to eclampsia, and that it occurs once in every 500 pregnancies. Other writers state its frequency variously at from once in 250 or 300, to once in 600 labors. Fatality to the mother, from being perhaps as high as seventy-five per cent., has in modern times fallen to twenty-five, or even less. The disease is most frequent in primiparæ and in twin pregnancies; illegitimate pregnancies would also seem to be more prone to its occurrence.

Without attempting to review the various theories that have been put forward from time to time regarding the pathology of this disease, I may say that I hold it to be due to an *auto-toxæmia—uræmia* if you like that term better; and I think that the weight of modern authority inclines to this view. Carter's definition of uræmia explains very well what I mean; he says: "Uræmia may be defined as the altered condition of health caused by the accumulation within the body of poisonous products that should be eliminated by the kidneys." In a former paper, read by me before this Society, I discussed very fully the pathogenesis of uræmia in general, so that I need not here say more than that I believe the condition to be due to the toxic influence of various animal alkaloids, or leucomaines, and ptomaines, on the nerve centres. These toxa, produced either normally or under various abnormal conditions, should be removed from the blood by the kidneys, and when this excretion does not occur, or is incomplete, the nerve centres suffer, and the various phenomena of uræmia occur. Now, in the pregnant woman the conditions are somewhat different from those of the

*Read before the Toronto Medical Society, Oct. 16th, 1890.

non-pregnant state, and more strongly predispose to the development of this auto-toxæmia. There is a larger amount of effete matter to be got rid of; for the mother has to eliminate both her own excretions and those of her child. Then, again, there is little doubt but that the gravid uterus has a tendency to cause obstruction to the circulation, by its compression of the aorta, vena cava, renal vessels, and perhaps the ureters, especially in abnormal positions of the fœtus. A third predisposing cause is to be found in the fact that in pregnancy the nervous system is in a peculiarly excitable condition. This excitability is comparable to what is the rule during early childhood, when convulsive attacks are so common.

It seems to me that from a pathological point of view the cases may be divided into two classes: (1) Those in which there is no organic kidney lesion; (2) those where some such kidney lesion pre-exists and co-exists; and I believe the latter class to contain by far the greater number of cases.

The majority of puerperal convulsions are associated with albuminuria, and often with the presence of tube-casts, œdema, and other symptoms of Bright's Disease. It does not follow, however, that puerperal albuminuria is necessarily accompanied by eclampsia; nor, perhaps, does it always point to nephritis; but when albuminuria is discovered during gestation, especially in a primipara, it is a note of warning that we will do well not to disregard.

It is quite possible that under certain circumstances toxic material may accumulate in the blood to such an extent that even healthy kidneys cannot eliminate it rapidly enough, and so a condition of acute toxæmia arises, and may set up an eclamptic attack; but such cases must be rare. The fact remains, then, that nearly all cases of puerperal eclampsia are due to nephritis, either acute or chronic.

Some of the reasons why pregnant women are so liable to nephritis, I have already referred to. The kidney lesion may first make its appearance during gestation, or, what to my mind is more probable, a previously impaired kidney may be still farther damaged during that period, so that while in the non-pregnant state it was quite sufficient for the ordinary needs of the economy, it fails to do the extra duty required during pregnancy. Perhaps if many of these cases were investigated we should find that there had been an attack of scarlatina in childhood, and the accompanying nephritis may never have been suspected.

Upon a proper understanding of the pathology of the disease must depend a rational treatment. If albuminuria makes its appearance during pregnancy, or dropsy, or any of the other symptoms which point to renal inadequacy, preventive measures should be at once adopted. The diet should be carefully regulated, and milk should form the main nitrogenous element, broths, soups, and beef essences should be avoided; but yolk of egg may be used freely; and farinaceous foods, prepared so as to be easily assimilable, should form the staple articles of diet. The bowels should be kept acting freely once or twice a day, by the use of mild aperients, preferably salines; and an ounce of potass. bitartrate may be taken every day in a pint of water or lemonade, to be drunk at intervals, as a diuretic. If the skin does not act freely, a vapor bath two or three times a week will be very useful. As there is usually anæmia, iron should be given in fairly large doses, unless otherwise contra-indicated; perhaps the best form is thirty minims of the tinct. ferri perchloridi three times a day after meals. This plan of treatment followed out for some weeks may prevent an attack of eclampsia when labor comes on, or at any rate rob it of much of its severity.

Treatment after the convulsions have really set in, or when the premonitory symptoms show that they are imminent, is to be discussed under two heads—*medical* and *obstetric;* and the methods to be adopted under the latter depend upon whether the eclampsia occurs before or after the period at which the fœtus is viable.

A great many remedies have been proposed for the treatment of puerperal convulsions, and I do not intend to weary you by even enumerating them all, but I will mention one or two. With regard to bleeding there has been and still is a decided difference of opinion among authorities, and the practice has still many earnest advocates. But if the view I have adopted of the nature of the disease be the correct one, then bleeding is rarely, if ever, indicated. I would go even farther and say it

is never justifiable. The beneficial effect that it sometimes apparently has may be secured by other means, and quite as promptly, too. The great majority of these patients are anæmic as it is, and can ill afford to lose any hæmoglobin, even though many of them look stout, strong, and well-nourished.

The great antidote for these cases is morphia; and, as it has to antagonize perhaps a considerable amount of poison, it must be given in comparatively large doses, gr. ½—ij., hypodermically, repeated as often as may be necessary to control the spasms, or rouse from the coma. This drug acts probably in two ways—(1) by diminishing the excitability of the nerve centres; and (2) as a physiological antagonist to the toxa in the blood. Morphia, however, is not to be used indiscriminately, and I would suggest as contra-indicating its employment, convulsions with contracted pupils. In most of the cases we have dilated or normal pupils, and in these, morphia is the remedy; but in some instances it would seem that a myotic poison is present in addition to the convulsants, and probably it is in these instances where morphia fails.

Another remedy is very highly spoken of by some authors recently, veratrum, and as a substitute for bleeding it is to be recommended. The tincture may be used hypodermically in m ii.—v. doses. Of chloral hydrate and potass. bromide, I need say nothing farther than that they are rather too slow in their action, though they are valuable adjuvants. Chloroform inhalations, of course, are very useful, and should be had recourse to when any obstetric operation is attempted. Brisk purgatives, too, like croton oil, sometimes do good. Diaphoresis should be encouraged by hot-water bottles, vapor baths, and the internal administration of jaborandi, or better, the hypodermic injection of pilocarpin. During the fits, which are usually of short duration, very little can be done, except to prevent the patient from injuring herself; but the treatment should be carried out in the intervals between the fits.

With regard to obstetric management, the course to be adopted depends on the period of gestation at which the convulsions come on. If before the fœtus is viable, it will be well to let the uterus alone and attend to the medical treatment. But if this fails, the question of emptying the uterus will present itself; this, however, should be the last resort.

If the convulsions come on after the fœtus is viable, and before labor has begun, it is perhaps best, in the interests of both mother and child, that labor should be induced as rapidly as possible. The os should be dilated so as to admit of the application of the forceps if possible, or version may be performed. If the convulsions come on after labor has begun, and the pains are strong and regular, chloroform should be administered, and the case left to nature to complete the delivery; but if there is a prospect of the labor being prolonged from any cause, we should interfere, and effect delivery without delay.

I am aware that this is not the teaching of some of the text-books, but I hope this matter will be fully discussed by those of you who have had some experience in such cases.

I shall now relate a case which occurred to me this last summer, and which illustrates most of the points I have referred to, and which, I am happy to say, was followed by a good recovery to the mother though fatal for the child.

Mrs. W., referred to me by Dr. Baldwin, handsome brunette, æt. 25, height 5 ft. 6 in., weight, 130 lbs., youngest of a family of eight, married between three and four years, no children.

Family history: Maternal grandmother died of heart-disease; father living, æt. 63, in good health; mother died æt. 49, had always suffered from asthma, and for some years from heart disease and dropsy, she died from right hemiplegia, forty-eight hours after being seized. One brother died of typhoid fever; another brother now has asthma. Other members of the family have generally enjoyed good health.

Personal history: She had the ordinary diseases of childhood, including scarlatina when two years old, a slight attack. When about twenty she had some low fever and marked anæmia, with a good deal of lumbar pain, and trouble with the kidneys. Three years ago she had another attack of lumbar pain and some kidney trouble; and she has always been more or less anæmic. Menses began at age of thirteen and a-half, and were very irregular; at times amenorrhœa, then menorrhagia, never much pain; but latterly she has complained of a sharp pain

at the extremity of the coccyx, especially when sitting. After being married eighteen months and not becoming pregnant, she consulted a medical man, who found an elongated conical cervix uteri with a pin-hole os, narrow canal, and some anteflexion. This condition was corrected by Dr. Temple, whom she consulted in January, 1889; and after being under his treatment for some months, as a result she became pregnant about November, 1889. For some years she used to suffer from severe headaches two or three times a week, usually accompanied by nausea. The bowels generally were constipated. She felt much better in every way, however, during the first four or five months of pregnancy.

History of present illness: I saw her first on July 21st, 1890, about 11 p.m. She thought she was about the end of the eighth month of pregnancy, and had not been feeling as well as usual for over a week. She had had very severe headache, with sometimes vertigo and muscæ volitantes. She complained also of lumbar pains, heart-burn, nausea, and occasional vomiting. She was very anæmic, and there was a certain amount of general œdema, more marked in the lower extremities. She thought she was passing a normal quantity of urine. Her pulse was weak. She said she perspired easily and freely. An examination of the urine at this time gave the following result: Color, light yellow, muddy; reaction, acid, sp. gr., 1.025; albumen, on heating, almost solid; *deposit*, granular casts, vaginal, vesical, and renal epithelium.

I gave general directions about diet, recommending milk freely, but abstention from other nitrogenous food as far as possible. Fish or beef was allowed once or twice a week. The bowels were to be kept free with salines, and I ordered her to drink every day a pint or so of water in which was dissolved potass. bitart. ʒi. I prescribed also tr. ferri perchloridi *M.* xxx., tr. digitalis *M.* v., *ter in die.*

July 29th. Found considerable improvement, no bad symptoms. Urine, light yellow, muddy, acid, sp. gr. 1.012, 47 ozs. in 24 hrs.; albumin, over $\frac{5}{6}$; *deposit*, a few hyaline casts, some pus.

Aug. 1st. Symptoms continue good. I discontinued the digitalis, and gave tr. ferri perchloridi *M.* xxx., tr. quassiæ *M.* xx., *ter in die.* The œdema of the face and upper extremities has almost disappeared, though still present in the lower extremities.

Aug. 4th, 3 p.m. She has had some diarrhœa and colicky pains, which I thought might be accounted for by the fact that she eat some green corn yesterday. Otherwise she continues better. Urine, yellow, muddy, acid, sp. gr. 1.019; albumen, less than ½; *deposit*, granular and hyaline casts, with some pus. Midnight—Summoned suddenly, and found her suffering intense pain from colic, with vomiting, which had come on two hours before. No indication of labor commencing. I gave her morph. sulph., gr. ⅓ hypodermically, and she soon got complete relief from the colic; but it left her with a very severe headache and occasional vomiting, for which I ordered bismuth subnit., gr. vii. ss., ac. hydrocyan dil. *M.* ij., every two hours; and cold to the head.

Aug. 5th, 4 a.m. She had a convulsion. I saw her between six and seven a.m., when she had had five convulsions, and now she had another typical one, with pupils somewhat dilated. I gave her morph. sulph. gr. ⅓ hypodermically. The os uteri was not at all dilated. I sent for Dr. Temple in consultation; he arrived shortly after 7 a.m., and we determined to empty the uterus. The fœtal heart could be easily heard. Chloroform was administered, the membranes were ruptured, and the cervix was with great difficulty dilated so as to admit of the application of the forceps, and she was delivered of a dead female, eight months fœtus, about two hours after dilatation of the cervix was begun. It was a head presentation in L.O.A. position. The placenta and membranes were adherent, and were removed by the hand in the uterine cavity. There was very little hemorrhage. An intra-uterine douche of corrosive sublimate, 1 in 5,000, was given. There was a good deal of bruising of the soft parts, and a laceration of the posterior fourchette extending up the mucous membrane of the vagina for about one and a-half inches. Three silk sutures were introduced, and, after washing off the external genitals with the corrosive sublimate solution, a napkin and binder were applied, and the uterus contracted well. She was still comatose, with the pupils strongly contracted, and temperature 97.6°F. Ice was applied to the head, and a hypodermic injection of pilocarpin hydrochlor., gr. ¼, given

This soon caused free diaphoresis, and after two hours there was a slight return of consciousness and some nausea. She was given sips of ice-cold whiskey, and, water at short intervals. The pupils remained contracted. Soon after delivery the bladder was emptied by catheter, and four ounces of urine obtained. This was smoky, muddy, acid, sp. gr. 1.017; albumin, nearly solid; deposit, blood, pus, renal epithelium, many granular, epithelial and hyaline casts, and numerous uric acid crystals. 6 p.m.—She had another convulsion, followed by a second an hour afterwards. I found her with a very weak, small, rapid, radial pulse, and unconscious. I administered *M.* xv. tr. digitalis hypodermically, with a beneficial effect on the pulse. The pupils still were strongly contracted. I gave a very grave prognosis, and the friends sent for Dr. Moorhouse in consultation, as Dr. Temple was out of town. About the time of his arrival she became violent and actively delirious. The pupils now became dilated, and the case forcibly reminded one of belladonna poisoning. We gave her morph. sulph. gr. ½, and atropiæ sulph. gr. 1.100 hypodermically. After fifteen or twenty minutes she became quiet and slept till between 1 and 2 a.m. Then she woke conscious, expressed a desire to urinate, and passed several ounces of dark-colored urine (not saved). She then went to sleep again for some hours, and woke between 6 and 7 a.m., conscious, though a little flighty, and with no recollection of what had happened during the previous thirty hours. She complained of no pain, only a feeling of tenderness, and she had no nausea. I ordered iced milk and lime-water in small, frequent doses.

Aug. 6th, 11:30 a.m. Found her looking and feeling a good deal better, temp., 101°F.; pulse, 125, small. She had considerable thirst, and complained of inability to move the left leg. There was no paresis, but there was pain about the lower part of the abdomen on moving the thigh. She had passed about ten ounces of urine. I gave her a bichloride vaginal douche, and administered tr. digitalis *M.* xx. by mouth. I ordered two ounces of iced milk and limewater every half-hour, with ice pellets or sips of weak whiskey and ice-water frequently, to allay thirst. I also ordered magnes. sulph. ℥sss. in concentrated solution, to be given every two hours till the bowels moved. 9 p.m.—temp., 101.8°F.; pulse, 132. The bowels had moved a little after two doses of magnes. sulph. There was some little abdominal pain, but no nausea. I gave her tr. digitalis *M.* xx. by mouth, and continued treatment as before, less the purgative.

Aug. 7th, 11 a.m. Found her quite bright and cheerful; temperature, 100.2°F.; pulse, 116. Bowels had moved and urine passed freely during the night. There was no abdominal pain or tenderness. I gave her a vaginal douche. The vulva was very sensitive, and she complained of hæmorrhoids. I gave her tr. digitalis *M.* xv. by mouth, and ordered tr. ferri perchloridi *M.* xxx., tr. digitalis *M.* viii., *ter in die*; also to drink potass. bitartras water; bread and milk was allowed, diet otherwise as before. 9:30 p.m.—temp., 100°F.; pulse, 120. Bowels moved and urine passed freely during the day, and she had been somewhat restless. Urine, by catheter bright yellow, clear, acid, sp. gr. 1.008; albumin a faint trace; reduced Fehling's solution; *deposit*, uric acid crystals, some pus corpuscles.

Aug. 8th, 4 p.m. Temp., 100.2°F.; pulse, 112; respirations, 23. Bowels moved early in the morning, and she passed urine freely. She now complained of pain on the left side about the lower angle of the scapula, evidently muscular. I gave her a vaginal douche, and allowed a more liberal diet. 11 p.m.—I was summoned suddenly, and found her complaining of a suffocating feeling round the heart, shooting pains in the epigastrium and over the abdomen; the stomach and colon were distended with flatus; there was no abdominal tenderness, no chill, nausea, or headache. I prescribed sp. ammon. aromat., sp. chloroformi aa. ℥i. to be given every hour till relieved; and ordered ℥ss. doses of magnes. sulph. every two hours till the bowels moved.

Aug. 9th, 11 a.m. She had rather a restless night, but is better this morning. Bowels moved freely and large amount of flatus passed, after two doses of magnes. sulph. Temp., 100°F.; pulse, 112. I gave her a vaginal douche, and removed the sutures; primary union had not been complete. The breasts were somewhat tense and painful, and I ordered them to be smeared night and morning with a mixture of equal parts of ex. belladonnæ and glycerin, and gentle pressure to be applied. I gave directions

for the douche to be given every 8 hrs., and as the iron did not seem to agree with the stomach, the dose was reduced one-half, and the following mixture prescribed: Sp. ammon. aromat., tr. chloroformi co. aa. ℥ss. aq. menth. pip. ℥i. quaqua hora p. r. n. Urine, by catheter, light yellow, clear, acid, sp. gr. 1.012; albumin, trace, reduces Fehling's solution; *deposit*, epithelial, granular, and hyaline casts, pus corpuscles, epithelial cells, uric acid crystals.

August 10th. Had a good night, feeling much better. Temp., 99.2°F.; pulse, 110; breasts all right.

Aug. 11th. Temp., 99.3°F.; pulse, 106. She still complains of some discomfort in the stomach after taking the iron, so it was discontinued for the present, and tr. digitalis, *M.* viii., *ter in die.* given instead.

Aug. 12th. Much better, no stomach distress, temp., 100°F.; pulse, 90. Ordered douche to be given only night and morning.

Aug. 14th. She continues better. Temp., 98.8°F.; pulse, 80. The digitalis was discontinued. Urine, as passed, pale yellow, containing flocculent precipitate of mucus and pus, acid, sp. gr. 1.014, albumin, trace; does not reduce Fehling's solution; no casts found.

Aug. 16th. Still improving. Temp., 99°F.; pulse, 72. She complains a little of visual defects. The potass. bitartras was discontinued, and permission given to sit up for a short time next day.

Aug. 20th. I found her sitting up, having been up about four hours, and she had been up for an hour each day for two days previous. Once or twice she had had a very severe headache; and she required magnes. sulph. every second day to keep the bowels acting freely. She is passing a good quantity of urine. Temp., normal; pulse, 64. I ordered again tr. ferri perchloridi, *M.* xxx., tr. digitalis, *M.* v., *ter in die.*, and McK. & R.'s pil. aloin, strych. et. belladonnæ No. 1, one pill *ter in die.*

Aug. 23rd. She says she feels very well; has had no headache. I ordered the douche to be given only once a day, and McK. & R. pills only twice a day, or as often as necessary to secure a regular daily motion. Urine, as passed, pale yellow, not quite clear, acid, sp. gr. 1.010, albumin, slightest trace; does not reduce Fehling's solution; *deposit*, a few epithelial and hyaline casts; vaginal, vesical, and renal epithelium pus, and bleached red blood corpuscles.

Oct. 15th. She reports herself in excellent health and better than she has been for many months.

A PLEA FOR INTUBATION.

BY W. R. SHAW, M.D., L.R.C.P. LOND.

That this is no new operation, any one can convince himself of by reference to the literature on the subject; for although not done with instruments of our modern invention, yet it has been performed, for we have evidence of catheters having been passed into the larynx for obstruction, as far back as the days of Hippocrates.

Bouchut was perhaps the first modern enthusiast for this treatment of laryngeal stenosis due to any cause, and not meeting with any success, went to the other extreme, and ridiculed it as a means of preserving life. Consequently he dropped it, but it was again taken up by Dr. O'Dwyer, of New York, who, having worked industriously, has perfected instruments, and to-day Bouchut again acknowledges its applicability.

There are always many who are prejudiced against modern innovations in medicine, and who object to have old convictions replaced by new ideas, and it is to some of the objections raised by them that this paper is devoted.

The best method of procedure would be, perhaps, to compare the relative advantages of each operation, as it is only by a just comparison that a right opinion can be arrived at.

Speed.—To be sure, this is an advantage applicable to both operations, but it is in one case an essential always, and in the other only exceptionally. Who that has done many tracheotomies does not know that first of all comes the preparation of the bed, then of the instruments, the giving of the chloroform, and finally a slow deliberate operation? The parts are surrounded by many important vessels and veins, engorged at the time through insufficient aeration of the blood. It is preferable to open the air passages with the admission of as small a quantity of blood as possible. There are, we well know, on record, cases in which the operation has been performed with one stroke of the knife, and further, the

knife has been known to have gone further than the trachea. Foremost of all, perhaps, it should have been mentioned that the parents have to be prepared for the undertaking, and all medical men know what a difficult and unpleasant task it is. This has to be done in both cases, but is not surrounded with the same difficulties in intubation as in tracheotomy. In the operation of intubation, the child is held up, the gag is placed in the mouth, the finger is passed into the mouth, the tube is directed into the larynx, and, the obturator being removed, the operation is performed. Surely celerity and simplicity can be used as strong arguments in its favor. But let us pass on to the after-results, for it is then that the great troubles with tracheotomy begin. The shortest time in which the canula can be dispensed with is a week, and the average in which it *has* been done is between three and four weeks; the difficulty lying in the fact that it is a very hard matter to wean the patient from the tube. In one of our cases we were three months, owing to the fact that, when it had been withdrawn for a few hours, it had to be replaced because of a spasmodic attack of suffocation coming on. Also, we must consider the fact of there being a surface exposed to infection, and the care with which the patient has to be watched as to temperature of the room, etc., for fear of bronchitis, pneumonia, due to the introduction of air into the lungs in such an abnormal manner.

It is needless to remark that no wound is necessary in intubation, and hence one source of infection is dispensed with, and also the liability to pulmonary complications is materially lessened. Then the tube in the larynx is removed on the fourth or fifth day, but exceptionally it has to be replaced again.

Having thus compared the two, let us proceed to reply to a few of the objections raised to intubation, which of course do not appear in a controversy regarding tracheotomy alone. The first one which presents itself to my mind, is the insertion of the tube into the œsophagus instead of the larynx, and the consequent swallowing of it. That this has happened, we need but refer to the reports of cases by the various operators, but it is all provided against by having a silk attached to the tube of the proper length. The silk is never removed until, by the cough and voice of the patient, the attending physician is sure that the tube is *in situ*. Then, again, as to the coughing it up and then swallowing it, there are records of such happening, but, as yet, no trouble has been experienced in those cases which have gone on to recovery, and the tube has been passed per rectum.

Secondly, the slipping of the tube into the trachea. With the tubes of the latest date, it is impossible for such an accident, owing to the largeness of the head, and where it has happened, it has been traced to the using of too small a tube, or one of the old style. But let us quote Dr. Dillon Brown on this accident: "This is an accident which, I believe, has never happened, and which, I believe, can never happen when a proper-sized tube is used, except as a result of injury to the larynx, made in attempt at removal. . . . The occurrence of this accident has been reported three times, but it seems to me that a careful analysis of these reports will show that such has not been the case. It should be remembered that the head of the tube, even if pushed below both the ventricular bands and the true cords, will still remain in the larynx, being held by its narrow sub-glottic division."

Injury to the larynx or vocal cords during intubation should not occur if proper care be used, and one of the great points to observe is, not to use force. If the tube does not go in the first time, it should be withdrawn and a second attempt made. Pushing membrane before the tubes is one of the strongest objections to their use, but it is of exceedingly rare occurrence, and it seems to me when such has happened it has been due to the improper introduction of it; as the tube and obturator form a wedge and have a tendency to divide, and not push before. But some teach, to get the tube engaged in the larynx, slip out the obturator, and then push the tube home with the finger. Anyone can see that it then becomes a gouge, which is the very thing to be avoided, and is fully guarded against by the construction of this instrument. But if membrane be pushed before the tube, then it only remains to rapidly extract it, and endeavor to produce expulsion by exciting cough, or the forceps, made for that complication, may be used.

Again, it is asked: Of what use are the tubes when the membrane extends below their lower

orifice? It seems to me that this is frequently the case; as how could membrane be expelled through the tube if it be not below? But such an argument is as much applicable against tracheotomy as intubation. But, of course, when the membrane has extended into the minute ramifications of the bronchi, then no operation will save the life.

Lastly, a short glance at the statistics of both operations will demonstrate that the proportion of deaths has not increased at all from this operation, but has been about the same. Of 806 cases of intubation, there were 221 recoveries, or 27.4 per cent. In 339 of these cases, death happened from pushing down membrane only twice; clogging of tube, twice; and neglect to notify when tube was coughed up, was the cause of death in four cases.

Up to the year 1888, Dr. Dillon Brown had collected statistics of 2,732 cases of intubation, with 646 recoveries, or 27.2 per cent.

Regarding the operation of tracheotomy, Drs. Lovett and Munro (quoted from Billings on Diphtheria) have tabulated 21,853 cases, with 6,138 recoveries, being 27 per cent.

Therefore, with such a relative proportion between the two, the simplicity of the operation of intubation, and all other things being considered, let us ask, should it not be preferable to tracheotomy?

P. S.—In using the term tracheotomy, it is needless to remark that it includes laryngotracheotomy and laryngotomy.

Selections.

CEREBRAL LOCALIZATION.

BY DR. DAVID FERRIER.

(An Abstract—Continued.)

MOTOR CENTRES.

It has been established by experiments on monkeys—and now so generally admitted that it is almost unnecessary to enter into detailed proof—that the destruction of the centres, excitation of which produces definite movements, causes paralysis of the same movements on the opposite side of the body, varying in degree, completeness, and duration, with the extent of the destruction of the respective centres. When the destruction is complete, the paralysis is permanent, and is followed in due course by descending degeneration of the pyramidal tracts of the spinal cord, and secondary contraction in the paralysed limbs. In illustration of this Ferrier narrates the result of an experiment on a monkey, which was exhibited at the International Congress in London, 1881—eight months after operation. In this there was motor paralysis, but cutaneous sensibility was unimpaired throughout. Another experiment is referred to.

Many similar experiments have been recorded by Horsley and Schafer, and their observations on the functions of the marginal convolution deserve special note. Extirpation of the marginal convolution causes paralysis of those movements which remain more or less unaffected by the destruction of the centres on the convex aspect of the hemispheres; namely, movements of the trunk, those of the hip muscles, as well as some of those of the leg. In order, however, that these movements should be entirely paralysed, it is necessary that the marginal convolution should be destroyed in both hemispheres; as it would seem that the trunk movements are so bilaterally co-ordinated in the marginal convolution, that the removal of one only is not sufficient to cause any marked effect. When both are removed, however, the most absolute paralysis of the trunk muscles is induced. "The attitude and general appearance of a monkey in which this double lesion has been produced is most striking. Instead of sitting up with back somewhat curved, in the manner normal to monkeys, an animal which has been submitted to this operation lies prone, with his legs and feet outstretched (or, at most, with flexed hips), back flat, tail straight and motionless, and arms put forward to clutch at any neighboring object. The head retains its power of rotation, as well as flexion and extension, and the movements of the eyes and facial muscles appear normal. The animal frequently props itself upon its elbows, but never assumes the normal sitting attitude. If the animal desires to sit up it can only do so by dragging itself into the sitting posture by its arms and hands, and holding on by these to the wires of the cage, or to any neighboring object. If the hold should be detached the animal tends to fall over. Progression is effected almost entirely with the arms, the monkey dragging itself

along by the aid of these, assisted by the flexion which occurs at the hips; the legs are quite limp and draggled, the dorsal surface of the toes being drawn over the ground."

Besides the movements of the trunk there are others which are bilaterally represented in each cerebral hemisphere. This holds in respect to the upper facial region, as well as those of the larynx. Hence, unilateral extirpation of the centres of these movements causes no, or scarcely any, perceptible impairment; and it is necessary that the centres should be destroyed on both sides in order that paralysis should result. It has been shown in monkeys that unilateral extirpation of the laryngeal centres does not appreciably impair the adduction of the vocal cords, whereas phonation becomes volitionally impossible when the centres are destroyed in both hemispheres.

It would appear that such movements as are not primarily bilaterally represented in each cerebral hemisphere are secondarily associated in accordance with a hypothesis, originally advanced by Broadbent, by comunsional fibres connecting the vulvar and spinal nuclei with each other. Though moderate stimulation of the cortical centres of the limbs gives rise to movements, as a rule, only on the opposite side, yet it not infrequently happens, if the stimulation be increased, that movements occur in the limbs on both sides. These are, however, more pronounced on the opposite than on the same side. In the monkey, as well as in man, it is not unusual to find descending degeneration in both lateral columns as the result of unilateral cortical lesions.

It was first pointed out by Brown-Sequard that lesions which induce hemiplegia of the opposite side also cause some diminution in the energy of the movements of the limbs on the same side. This is a result which we should expect if each hemisphere were in relations with both sides of the body.

The bilateral relations of each hemisphere which exist to some extent in the monkey and in man are more marked in the case of dogs and the lower animals. The bilateral representation accounts for a certain amount of recovery, even when the motor centres of one hemisphere have been completely destroyed. It has now been established beyond all question that cortical lesions of the motor zone in man, if they are such as actually to destroy and not merely to push aside the gray matter of the respective centres, invariably cause paralysis of volitional motion in the related parts. Such results have followed not only the distinctive lesions of disease, but also surgical excisions of the the cortical centres. Not only does general hemiplegia result from lesions of the whole of the Rolandic area, but limited lesions cause limited paralysis, or monoplegiæ of the face, arm, and leg, in precise correspondence with the results of experiments on monkeys.

Apart from motor paralysis Ferrier has not been able to detect the slightest impairment of special, or tactile and general sensibility after destruction of the motor centres. It is unquestionable also that in man paralysis from lesion of the motor area is, in the majority of instances, an essentially motor affection, and is unaccompanied by any discoverable defect of tactile, muscular, or general sensibility.

Ferrier does not consider that the sensory aura which occasionally precedes, or accompanies a localized epileptiform spasm can be taken as a proof that the motor and sensory areas coincide. It may prove contiguity, functional or anatomical, but not coincidence. For the most careful investigation in a large number of cases has failed to detect the slightest impairment of any of the forms of sensibility, while the motor affection has been of the most pronounced character.

Voluntary movements are capable of being carried out in the entire absence of all sense of movement. A patient, anæsthetic from spinal disease, was able to co-ordinate his limbs perfectly, and move them freely and forcibly with the aid of vision: and even without the aid of vision to employ them with a fair degree of precision and steadiness. Though the patient is able to move the anæsthetic limb voluntarily, he has no knowledge of its position or the resistance which may be offered to its intended movement.

From various observations Ferrier concludes that the motor centres of the cortex are not the centres of tactile or general sensibility, nor are they the centres of muscular sense, but that they are motor in precisely the same sense as other motor centres; and though functionally and organically connected, are anatomically differenti-

ated from the centres of sensation, general as well as special.

FRONTAL CENTRES.

The region of the brain which lies in front of the Rolandic area, and marked off by the precentral sulcus, is one respecting the functions of which there is still considerable doubt. Anatomically it is related to the motor tracts of the internal capsule. These tracts, according to the investigations of Flechsig, lie in the inner portion of the foot of the crus, and connect the frontal lobe with the opposite cerebellar hemisphere indirectly through the gray matter of the pons. The effect of electrical irritation, combined with those of destruction, more particularly of the post-frontal region, indicate that this part is related to the lateral movements of the head and eyes. Irritation, as we have seen, causes opening of the eyes, dilatation of the pupils, and conjugate deviation of the head and eyes to the opposite side. At the moment of destruction of this region in the one hemisphere there always occurs a temporary deviation of the head and eyes to the side of lesion. This, however, is only transient, even when the destruction has been almost if not absolutely complete. In two experiments, after bilateral destruction of the post-frontal area, the animals were unable to turn the head or eyes to either side for a day after the operation. The removal of the pre-frontal region alone caused no discoverable physiological symptom, either sensory or motor. But Ferrier has found that after the symptoms which followed destruction of the post-frontal area had entirely disappeared, the subsequent destruction of the pre-frontal area induced paralysis of the head and eyes of exactly the same nature as before.

Ferrier has recently extirpated, practically, the whole of the frontal region of the left hemisphere. When the animal began to move about a few hours after the operation, it was observed to turn round from right to left, and the head when at rest tended towards the left side. The right eyelid dropped considerably, and the right pupil was distinctly smaller than the left. Next day the conjugate deviation of the eyes continued, and they could not be turned to the right, but the lateral deviation of the head was not so pronounced. The inclination of the head towards the left gradually diminished, but the inability to turn the eyes to the right continued during the whole time of the animal's revival. It died suddenly from cerebral hemorrhage ten days after the operation. In this case the conjugate deviation of the eyes continued longer than Ferrier had observed it in any former experiment, and this was no doubt in relation with the almost, if not complete, removal of the frontal lobe.

This experiment shows that destruction of the frontal region causes not only conjugate deviation of the head and eyes, but also a temporary paralysis of those movements which are also excited by electrical stimulation, namely, elevation of the eyelids and dilatation of the pupils.

There is reason for believing, therefore, that the lateral movements of the head and eyes are not capable of being permanently paralysed, unless every portion of the frontal region be completely destroyed. Beyond these, Ferrier has never been able to discover any other physiological symptoms on removal of the frontal lobe. He has never observed any affection of vision.

In addition to the paralysis of the movements of the head and eyes on destruction of the frontal lobes, Ferrier has observed a defect which he has endeavored to correlate with the inability to look at, or direct the gaze towards, objects which do not spontaneously fall within the field of vision. It is a form of mental degradation which appears to depend on the loss of the faculty of attention, and Ferrier's hypothesis is that the power of attention is intimately related to the volitional movements of the head and eyes.

The recorded cases of injury and disease of the frontal lobes in man are in accordance with the negative character of the experimental lesions, unilateral or bilateral, so far as relates to the sensory and motor faculties in general; and in certain an intellectual deficiency and instability of character have been observed, not unlike those occurring in monkeys and in dogs.

MOTOR PARALYSIS RESULTING FROM THE HYPODERMIC INJECTION OF ETHER.—(By David Wallace, F.R.C.S. Ed., read before the Medico-Chirurgical Society, Edinburgh, April 2, 1890). —For the hypodermic injection of ether there are two generally recognized methods: 1st, it may be injected subcutaneously into the cellu

lar tissue immediately under the skin; or, 2nd, it may be injected deeply into the belly of a muscle. When we use the former plan there may be a little emphysema produced by the rapid volatilization of the ether, and the small operation is associated with a little pain. If, on the other hand, we inject the ether deeply into a muscle, there is no pain, but there is a risk of a deep-seated abscess forming. Ether is, however, a powerful antiseptic, and therefore, even if the needle used for the injection be not absolutely aseptic, the risk of this latter accident is small.

CASE I.—During the evening of January 15th of this year I was watching a patient who suffered from an acute inflammatory swelling in the neck, which had been freely incised an hour or two previously. The patient suddenly became collapsed to such a degree that the radial pulse was imperceptible. As rapidly as possible I gave an injection of ether hypodermically, pushing the needle into the most accessible part of the body, viz., the extensor aspect of the left forearm at the junction of the lower and middle thirds. I injected about 20 minims of ether sulphuricus. The patient recovered from the collapse, but next morning I was struck by the fact that he had paralysis of the extensor group of muscles of the forearm. On analysis of this paralysis, I found the whole of the muscles supplied by the posterior interosseous nerve completely paralyzed. There was, however, no "drop wrist," the extensor carpi radialis longior serving to prevent this. It was obvious that the paralysis was due not to compression of the musculo-spiral nerve during sleep, but to some cause affecting its chief muscular branch, the posterior interosseous nerve.

CASE II.—On 28th January, ten days after the occurrence of Case I., Professor Chiene had occasion to perform excision of the testicle. Towards the end of the operation it was observed that the patient was very pale and the pulse small and weak. It was deemed advisable to inject ether, and this was done by the doctor in much the same way as in Case I. At the most accessible part, the back of the forearm, 20 minims of ether sulphuricus were injected deeply, the needle being pushed as rapidly as possible into the arm. On the following day the patient was disc vered to have paralysis of the muscles supplied by the posterior interosseous nerve, although not to such a marked extent as in the first patient, as he still retained some power of extending the ring and middle fingers.

The first case having been more directly under my own observation than the second, I may describe to the Society its subsequent history, dismissing the latter case with the remark that at the present time (nine weeks after the occurrence of the paralysis) the patient has not fully regained the use of his hand, although voluntary power of the affected muscles is gradually returning.

The subsequent history of Case I. has been as follows:—During the first week the patient was so ill that nothing could be done to treat the paralytic condition other than placing the hand in the most comfortable position for the patient. At the end of the week massage was begun and regularly used twice daily, while the patient was at the same time directed to constantly endeavor to use the muscles, the power of which had been lost. This treatment was continued for one week, but gave rise to no improvement. Blisters over the course of the posterior interosseous nerve were then applied, but their application produced no visible change in the condition, and it was therefore decided to use electricity. Faradism produced no contraction of the muscles, even when the current was sufficient to cause severe pain. Galvanism was therefore had recourse to. On the 14th February, one month after the paralysis occurred, Dr. Wyllie—who kindly undertook the electrical treatment—examined the arm carefully. He found the only muscles of the outer border and back of the forearm not paralyzed were the supinator longus, the extensor carpi radialis longior, and the anconeus, *i.e.*, all the muscles supplied by the posterior interosseous nerve were paralyzed. They were at the same time markedly atrophied. The other muscles of the forearm were in their natural condition. The common sensibility was unaltered. The current produced by 45 Laclanche cells—a current sufficient to pass through the extensor muscles to the flexors—was required to get contraction of the affected muscles on the first day of the application, but two days later the current from 27 cells produced an equal amount

of contraction. After the daily application of galvanism for one week, the muscle contractions were sufficient to partially extend the thumb and fingers.

On March 8th—that is, after three weeks of galvanism—the wasted muscles were found to have greatly increased in bulk and firmness, and their passive resistance to the flexors was such that the fist could be firmly closed. There was, however, no power of voluntary movement,

On March 15th, eight weeks from date of paralysis and after four weeks of galvanism, the middle and ring fingers could be voluntarily extended, and a week later the little finger could be extended, while slight abduction of the thumb was got by the action of the extensor ossis metacarpi pollicis and extensor secundi internodii pollicis. The primi internodii pollicis was still devoid of any voluntary movement. At this date the interrupted current was again tried, but stimulation of the musculospiral or posterior interosseous nerves had no visible effect on the extensors.

Present Condition.—The patient has rather more power of abducting the thumb, and can slightly dorsiflex the fingers. The hand generally is much more useful. The muscles which have their nerve supply from the highest part of the posterior interosseous nerve are those which can be chiefly used by the patient, *i.e.*, those muscles supplied by twigs furthest away from the point of the injection of the ether.

The gradually increasing strength of the muscles may perhaps be better gauged by the result of the dynamometric examinations make at stated intervals :—

On 22nd February, with left hand 70 lbs., right 275 lbs.

On 18th March, with left hand 80 lbs., right 275 lbs.

On 1st April, with left hand, 170 lbs., right 275 lbs.

For an explanation of the paralysis two thoughts naturally suggest themselves—first, that the posterior interosseous nerve trunk was pierced by the needle, and the ether injected directly into the trunk of the nerve; second, that the ether used was a bad preparation, and had a neurolytic action, or that it had a local toxic action which affected the nerve just as in lead or alcoholic poisoning. The latter explanation can be dismissed, as on testing the ether it was found to be a good preparation. The former explanation has to be considered from an anatomical point of view. Normally the posterior interosseous nerve trunk would be situated about three inches above the point where the needle was introduced, and if we subtract an inch from that distance for the length of the needle, the nerve trunk would be still two inches distant. The likelihood of an abnormal distribution of the nerve is minimized by the accident occurring in two cases, but further any abnormality of the nerve is very rare. Quain does not mention any example of its occurrence.

The explanation would rather seem to be that the ether after injection would diffuse most rapidly through the intermuscular spaces, and as it is in these that the nerve branches chiefly lie, the ether coming into contact with these branches would cause coagulation and destruction of the constituents of the nerves, and in that way destroy their conducting power. Then the immediate local effect would probably be followed by some degeneration of the nerve going to a higher level, while neuritis would be set up as indicated by the pain felt by the patitient during the first three or four weeks of the paralysis. This explanation is borne out by an experiment performed by Lauder Brunton and his assistants, and quoted by the former in the Croonian Lectures on the Relationship between Chemical Structure and Physiological Action. The method employed in this experiment was to take "the sciatic nerve of a frog with the gastrocnemius muscle attached, so that its contraction and non-contraction when the nerve was stimulated might serve as an index for the presence or absence of functional activity in the nerve. Alcohol and ether, when applied so as to act on the nerve trunk, destroyed conductivity before irritability, so that stimulation applied to the nerve further away from the muscle than the part acted on by the ether gave no effect, while when applied nearer the muscle than the part affected by the ether there was contraction of the muscle."

Since these two cases have come under my notice I have tried, in every way open to me, to find references to similar cases, but have only

succeeded in finding one, which was kindly supplied to me by Dr. Lauder Brunton. There is no mention of such an accident in any of the medical works to which I have referred. The two cases I have quoted seem to bear out the conclusions arrived at by M. Arnozan :—

First, That paralysis may be caused by the injection of ether deeply into muscles.

Second, That the prognosis is favorable, and although recovery may be long delayed, yet it does take place.

Third, That galvanism hastens the cure in a very marked fashion.

Further, I think that the possibility of such an accident occurring indicates that when we use hypodermic injections of ether the ether should be introduced subcutaneously; but if put deeply into a muscle, we should choose a fleshy muscle, such as the deltoid or gluteus maximus, where there is less risk of the ether in a concentrated form reaching the nerve branches than when it is injected into such a part as the extensor aspect of the forearm. In future I shall, even in cases of threatened syncope, take the little while necessary to pinch up the skin and inject subcutaneously.—*Edinburgh Medical Journal.*

NOTE ON THE TREATMENT OF COLD ABSCESS. —(By F. M. Caird, F.R.C.S, Ed., Assistant Surgeon, Royal Infirmary; Lecturer on Surgery before the Medico-Chirurgical Society of Edinburg, 2nd July 1890.) During the past few years various methods of treatment for large cold abscess have been introduced. These have had for their object the reduction of the somewhat protracted stay in hospital which has hitherto been necessary, as well as a corresponding diminution in the amount of dressing and the anxious care which such cases afford. Sir Joseph Lister's plan of opening and draining the abscess with the most stringent antiseptic precautions, while at the same time continuous rest was obtained by means of the long splint, extension and careful nursing, was one in which the vitality of the surrounding tissues was called into play to react upon the abscess wall and cause its absorption. The results as seen in his practice (*vide* Mr. Watson Cheyne's Antiseptic Surgery) are simply unrivalled, and constitute an enduring monument to the training, zeal, and fidelity of his house surgeons and staff. The time occupied in the absorption of the pyogenic membrane and in the cure of the associated caries is, however, often very lengthy, and the slightest mishap at dressing may undo the care of months. Attempts have therefore been made to obviate this by a direct attack on the unhealthy granulation tissue of the abscess wall, either by the introduction of suitable agents, such as iodoform, or by removing it with the sharp spoon, and endeavouring to get the raw surfaces to unite by means of judicious support, pressure, or buried sutures. It is to illustrate what may be done by removal of the abscess wall and the attempt to get a union by the first intention that the following cases are recorded. The method is briefly as follows :—The patient having been chloroformed and the skin shaved and carefully purified with carbolic lotion (1 to 20), the abscess is opened by a small incision, into which the finger is at once passed. The whole of the wall which is accessible is now scraped bare with the finger nail. It is easy to feel the pyogenic membrane peeling off in large flakes and shreds, and the finger readily recognises when a perfectly raw surface is left. If the entire extent of the wall is not accessible, a second incision is made, the first opening is plugged, and from the second aperture the remainder of the cavity is now scraped bare. It is advisable not to allow any pus to escape, since one can more easily strip off the lining membrane and judge of the thoroughness of the scraping when the abscess is distended. With the finger-nail we may scrape away the granulation tissue with impunity from off important structures, and the finger pulp tells exactly how much is being done and how much has to be done—in this respect differing widely from the sharp spoon, which cannot be used with the same freedom or accuracy. The pus is now allowed to escape, and the cavity is thoroughly washed out with boiled boracic lotion, warm, until the fluid streams away clear and transparent Very short tubes may now be inserted if need be, and a couple of sutures should be put in the wound, but not tightened up. The dressing consists of a large mass of moist gauze wrung out of carbolic lotion, and over that a large corrosive wool mass, secured in position by carefully-applied bandages of domet. Over all

a piece of elastic webbing is carried, and the patient kept absolutely quiet in bed by means of suitable splints. On the following day the tubes may be removed and the stitches tightened up. Future dressings are determined by the rules common to antiseptic surgery.

Case 1.—C. H., æt. 22, a nursemaid from Shetland, was admitted to the Royal Infirmary suffering from a large gluteal abscess. Family history and general state of health good. About two years ago she fell on the ice. The buttock then gradually became swollen; she limped slightly; complained of nocturnal pain, and lately has had starting of the limb. Prolonged rest and iodine applications have been tried without benefit. On examination there is found a large fluctuating mass, which lies under the gluteus maximus, and extends from the anterior superior spine to below the gluteal fold, causing the right buttock to project enormously. The abscess was opened, as above indicated, on 12th July. It was dressed on the 13th, 14th, 15th, 17th, 19th, and 21st. On the 23rd a collodion dressing was applied, and on the 8th of August she left for Shetland.

Case 2.—H. C., æt. 48, crofter, Shetland; family history uncertain. In March last, gaining the crest of a hill, he was blown over by a gust of wind. He was thrown on his hip, and experienced great pain in the thigh and spine. In June swelling of the thigh was marked. It was aspirated on two occasions, but latterly has rapidly increased. He is in poor health, has lost flesh rapidly, is rheumatic, and suffers from iritis. The abscess stretches from the lower third of the thigh upwards, and is lost and ill-defined beneath the gluteal muscles. On 24th September the abscess was treated. Two incisions were requisite on account of the size of the cavity, and the finger was inserted and the wall scraped from one incision above the gluteal fold, and a second about the middle of the thigh. A long splint was applied, and daily dressings made use of till 27th September. On the 2nd October the long splint was removed. The limb was again dressed on the 5th October. A little serum was found on changing the dressing on the 13th and 19th October. The patient left on the 24th healed.

Case 3.—K. F., æt. 7, suffers from Pott's curvature and double psoas abscess. In the right groin there is a scar due to an abscess which was opened last year, and for which she was treated for eight months in a hospital. Each lumbar region and groin is occupied by a large fluctuating swelling. The abscesses are evidently distinct and separate, and do not communicate across the spine. On January 1st, 1890, each collection was opened below Poupart's ligament; the finger was then introduced and the wall scraped as far as possible. A large bougie was then introduced, and the point made to project in the loin, where it was cut down upon, the finger again inserted here, and the scraping of the upper portions of the cavities completed. The right collection contained pure serum alone; the left contained pus, and on the left side of the second lumbar vertebra a distinct hollow was found, from which were removed three small portions of necrosed bone. The walls of this depression were rather smooth and not distinctly carious. A double long splint was applied. The patient had headache, diarrhœa, retracted abdomen, and dilated pupils for a day or two after the operation, and her condition gave rise to some uneasiness. It was thought advisable to dress rather frequently in this case from the risk of soiled dressings. On the 18th January the left side was sound, and on February 12th the right side was healed. She was kept in bed till March 18th.

Case 4.—J. M'K., æt. 16, sawyer, Killen. A strumous lad, who already has had excision of his left os calcis, and who suffers from phthisis, caries of the left ankle, and abscess of the popliteal space. On the 28th October the foot was removed, and the abscess which filled the popliteal space was scraped. On the following day it was dressed and the sutures tightened. There is no further record of dressing, but on the 28th November he left for home healed. On re admission with disease of the right hip-joint, the popliteal space was found sound and well. Similiar results were gained in a comparatively short space of time in a series of ten smaller chronic abscesses of the neck and lower extremity. Two cases were not successful, but in one of these, in which the pus lay beneath the calf muscles and extended into the popliteal space, no splint was applied, and the wound became septic. The other case was already septic, and the imperfect clearing out of long sinuses

about the pelvis and sacro-iliac synchondrosis led to a general infection which nearly cost the patient her life, from septic pneumonia, empyæma, and fever. She, however, ultimately made a most satisfactory recovery. The temperature remained practically normal in all the cases save the two which were septic.—*Edinburgh Medical Journal.*

TREPHINING AND EMPTYING OF A LARGE ABSCESS OF THE BRAIN ON ACCOUNT OF EPILEPTIFORM ATTACKS; RECOVERY. By Dr. Hans Schmid, of Stettin.—A nineteen year-old man had received a blow on the left side of the skull 5 months before; loss of consciousness followed; there were no other immediate brain symptoms; the wound suppurated; small pieces of bone were discharged in the pus, and a small suppurating fistula remained over the back of the left parietal bone. For the last three months the patient had suffered from typical epileptiform attacks with well-marked aura-clonic and tonic spasms, especially in the right lower extremity. There were no other brain symptoms. The skull was trephined with a chisel in the neighborhood of the fistula. After incision of the dura, which was adherent to skull and brain, and enlargement of the narrow fistula leading into the substance of the brain, a collection of pus was removed from a cavity, of about the size of a pigeon's egg in the brain substance. Recovery was rapid without further incidents. For the last three months there have been no epileptiform attacks. The ultimate result remains to be seen.—*Centralbl. f. Chir., 1890, 25. Medicinisch-Chir. Rundschau, Aug. 1st, 1890.—G.A.F.*

BAELZ recommends the following for chilblains and chapped hands.

℞	Caustic Potash,	0.5.
	Glycerine.	
	Spirit, a.a.	20.0.
	Water	60.0.

The hands should first be bathed in warm water and then rubbed with the mixture. This treatment employed once a day produces a cure in from two to three days.—*Monatsschr. f, Pract. Dermat., 1890, 288. Deutsch. Med. Wochenschr, 1890, 23. Medicinische-Chirurgische Rundschau, July 15th, 1890.—G.A.F.*

A SONG FROM THE INTERNATIONAL CONGRESS.—The following was sung at the banquet of the Rhino-laryngological Section of the Tenth International Medical Congress. Berlin, August 6th, 1890.*

RHINOLOGY.

BY MICHAEL OF HAMBURG.

For all the ills we now endure
With calm philosophy,
There's only one sure, certain cure—
It's Rhinochirurgy.

Chorus.—The nose must straightway be burned out;
'Twill always cure beyond a doubt.
Tiralalalalalala tiralalalalala.

Whoever through his nose doth speak,
Whosoever's nose is clogged,
Who e breath's asthmatic all the week,
Whose sleep is much befogged;
His nose must straightway be burned out,
'Twill cure him sure, beyond a doubt, etc.

And he who suffers from migraine,
Whose head is dull alway,
Who feel somewhere some little pain,
Or fev'rish gets from hay,
His nose must straightway be burned out, etc.

The maiden too, with goitre dread,
Whose heart beats pit-a-pat,
Whose eyes seem starting from her head—
Basedow described all that—
Her nose must straightway be burned out, etc.

Then, when acid chloracetic
Fails, as fails aristol,
Pyoktanin energetic,
Or useless iodol,
The nose must straightway be burned out, etc,

Whoever holds his nose too high,
Or pokes it where he shouldn't,
Or gets it twisted all awry,
And pointing where it wouldn't,
His nose must straightway be burned out, etc.

If bent, or straight, or small, or big,
Or short, or long, or lame,
Or dirty, or of famous rig—
It's all and one the same—
That nose must straightway be burned out, etc.

To woman, now, a thund'ring cheer,
Let every man ring out!
Who don't join in, or doth appear
Unwilling to shout,
Let his nose straightway be burned out;
'Twill cure him, sure, without a doubt.
Tiralalalalalala tiralalalalala.

—*Med. News.*

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* *International Centralblatt f. Laryngologie und Rhinology*, September, 1890. (Translated by a Philadelphian.)

TREATMENT OF EPISTAXIS.—By Benjamin Ward Richardson, M.D., F.R.S.—The surgeon may discard mere empirical plans for his own rational methods, the production of a firm coagulum, and the maintenance of a gentle but decisive pressure. These two objects are met by a good styptic plug, and no plug answers so well as one made of cotton, charged with perchloride of iron. If the cotton be sufficiently moistened to admit of being nicely modeled, it may be made firm and shapeable enough to be passed, like a bougie, along the nasal canal quite into the pharynx, and, formed like a wedge, can easily be made to fill firmly the whole of the canal, as completely as if it were drawn up through the pharynx from behind; and it may, if necessary, be pulled down into the throat through the pharynx, so as to make the wedge the firmer and more secure. After the cavity is thoroughly plugged on the bleeding side, or if necessary on both sides, a gentle pressure may be applied to the nostril with the fingers, until the plug, soon charged with coagulated blood, is firmly set; and this effected, absolute rest for ten or twelve hours is sufficient to effect a cure; but it is wise not to remove the plug until it can easily be blown out of the nostril by the patient. In the *New York Medical Record* Dr. Friedenberg suggests another very simple and effective mode of plugging, which he thinks is as good as Bellocq's cannula. He takes a piece of rubber drainage-tubing of small calibre, but of sufficient resiliency, and about ten inches in length. One end of this he introduces into the nasal cavity, and pushes it along the floor of the inferior meatus, through the clots, until it reaches the pharynx. Catching the ends in the pharynx with the forceps, he draws it out by the mouth, attaches to it a small compact wad of elastic lamb's wool, rolled in iodoform gauze, and drawing upon the nasal end, slips the wad into the post-pharyngeal space, and stretches the tube until the cessation of all trickling of blood down the post pharyngeal wall shows that the post-nasal aperture is occluded. Then, still keeping the tubing taut, he packs the anterior nasal recesses with long strips of iodoform gauze all round the tubing, ties a knot in the rubber close to its exit at the nostril, and through it passes a cross-piece of tubing of large calibre, just long enough to fit easily into the nostril. Finally, he releases the end of the rubber, and so leaves in the bleeding cavity a firm plug, which can be easily removed by drawing the tube a little way out and dividing it behind the knot. It appears to me that this is a most simple and excellent mode of plugging, and that any good styptic like tannin or iron perchloride may be well applied by it. I should prefer it to Bellocq's cannula, which I have made use of with less success than I had anticipated. In addition to the local treatment named above, it is always good practice to administer a saline purgative, of which none can be better than the late Dr. Druitt's "Haustus magnesiæ sulphatis acidus": —

R.	Magnesiæ sulphatis,	ʒj-iv	
	Syrup, aurantii,	fʒij	
	Acid, sulphurici dil.,	mx-xx	
	Aquæ,	tʒiss.	M

Fiat haustus.

This draught may be administered with advantage in a wineglass of water, twice a day, for a day or two after the hemorrhage has ceased.—*Coll. and Clin. Record.*

THE EMPLOYMENT OF ICHTHYOL IN DISEASES OF WOMEN.—In his father's clinic, Freund saw remarkably good results from the use of ichthyol in various diseases of the sexual organs. Its favorable results depended mostly on its sorbefacient properties. Old chronic parametritis, chronic and subacute parametritis with exudations or cicatricial bands, cicatrices of the vagina, of the fornix vaginæ and of the vaginal portion (of the cervix), chronic inflammation of the tubes and ovaries, were most favorably influenced. Cicatrices became thin and soft, swollen tubes were emptied of their contents. The administration was partly internal in form of pills, partly in the form of vaginal tampons of a mixture of ichthyol and glycerine, ointments for friction over the abdominal walls, painting of the part with pure sulpho-ichthyolate of ammonium. No injurious results were observed from the use of this drug.—*Berlin Klin. Wochenschr, 1890, 11. Deutsch. Med. Wochenschr, 1890, 26. Med. Chir. Rundschau, Aug. 1st, 1890.—G.A.F.*

A valuable general tonic for females:—

R.	Syr. Hypophos. Comp.	4 oz.
	Aletris Cordial [Rio]	4 oz.

M. Sig. Two teaspoonfuls before meals.

THE
Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

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TORONTO, NOVEMBER 1, 1890.

SCIENTIFIC AND PRACTICAL MEDICINE.

It is pretty generally recognized as a truism, that students in Medicine should cultivate both the Science and the Art. The advances in Science during recent years have been wonderful, and our medical colleges have found it difficult to keep abreast of the times. In fact, a large majority, especially on this continent, are sadly deficient in their facilities for teaching modern science. It unfortunately happens that modern requirements in this direction involve a great increase in expense. As Sir William Turner expressed it in his opening address, delivered at Queen's College, Birmingham: "Money is the sinews of education as well as of war. The higher education is an expensive luxury." The people of Edinburgh recognized this fact a few years ago, when they raised, by public subscription, $800,000 for the building and equipment of a new school for the teaching of Medicine in the University in that city.

Dr. J. E. Graham, in his opening lecture for the Medical Faculty of the University of Toronto, referred to the expense connected with the teaching, and gave instances of great liberality shown to medical colleges in various parts of the world, such as $6,000,000 to Johns Hopkins University and Hospital, and $80,000 a year by California to the Medical Faculty of its University, etc. Probably the most remarkable instance of such generosity mentioned by Dr. Graham, was that of the Canton of Zurich, with about 200,000 inhabitants, which gives to its University $50,000 a year. For Canada, he could not say much as a whole, but he spoke of the large gifts from private citizens to McGill University. In Toronto, the amounts donated to educational institutions have not been numerous. The McMaster bequest of over a million dollars is the largest, and is now the mainstay of McMaster University. The gift of $100,000 by the late Senator Macdonald, towards a University Park Hospital, was a most generous one, and is likely, in the near future, to bring forth rich fruit in the shape of further contributions to the same object. The recent disaster to the Provincial University has called forth generous responses to the appeals of her friends. Such examples are infective, and we hope that as the city grows in wealth her citizens will become still more liberal.

Are we, in Medicine, paying too much attention to Science and too little to Art? This question is now being discussed in Great Britain. Mr. Lawson Tait set the ball rolling at the recent meeting of the British Medical Association, when he attacked, in his usual trenchant style, what he called "that senseless system of biological teaching which has set in as a fashion at Cambridge, at Oxford, and at Edinburgh." Many are the comments that have been made on his remarkable address; but, happily, he stands almost alone in Great Britain in his attitude towards scientific teaching in Medicine. Many of the orators at the opening exercises, notably Sir William Turner and Sir James Paget, entered a most emphatic protest against such sneers.

Sir William Turner says: "One sometimes hears the question asked, 'Why should a medical student spend so many months in the study of these subjects which have little, if any, direct relation to the treatment of disease, when his time might more fitly be spent in the wards of a hospital, or in otherwise attending the sick or hurt?' I am one of the last to undervalue a thorough system of clinical training; but I hold that the best preparation for it is the cultivation of a scientific spirit and method, of the power of seeing things correctly, and of giving a proper interpretation to the meaning of what is seen."

Sir James Paget, in referring to the amusing stories of the failuries of the scientific men, says: "But that which may be held most certainly is that there is absolutely nothing in medical practice which cannot be learned by the student of Science, and that the student of Science may

learn many things in practice of which the practical man will remain ignorant. . . . Education in Science in the formation of the mind brings about a fitness for accurate and careful observation; for, let it be remembered, that these sciences which are especially called preliminary sciences—for so they are intended,—are well fitted to lead the way towards the ability to study that which is by far the most difficult in the biological class of sciences—the study of diseases and the manner of treatment."

The opinions of these distinguished teachers of anatomy and surgery must, of necessity, carry great weight. Few will undertake to controvert them. Again comes the question, "Is it possible to cultivate the scientific aspect of Medicine at the expense of the practical?" We believe it is, and think that Germany furnishes many examples of one-sided teaching, while Great Britain makes few such mistakes. We should ever remember, however, one thing—if a man does not learn Science in his student days, he never does; but if he gets a proper scientific basis while at college, he may become as practical as you wish afterwards. On the whole, the British plan, which has been adopted by some of our Canadian colleges, of teaching Science in the laboratories for two years, and practical Medicine for the two remaining years of the course, is a thoroughly safe one, and likely to lead to the best results in the long run.

LADY DOCTORS IN INDIA.—The male practitioner, excluded alike by his sex and his religion, has had in the past no opportunity for the exercise of his art among the women of the east, and, more particularly in India, lady practitioners have found a sphere of usefulness and have accomplished good work. Quite recently, however, it is said that native opinion has undergone a change. In the hospital of Lucknow, for example, it is usually found that native female patients decidedly prefer to be treated by gentleman in the civil or military medical service, and this notwithstanding that the women's ward is under the care of a female practitioner. The women of this class, however, are likely to be of inferior caste and of low social status, and it is not to be expected that the higher caste women will share these advanced views, at all events for some time to come.

CURRENT MEDICAL LITERATURE.—Those who, from time to time, wish to gain access to recent writings on any one medical topic often experience great difficulty. There are so many sources of publication both at home and abroad, that one is puzzled to know where to look. We notice that a supplement is now being published to the *British Medical Journal*; it is a weekly epitome of current medical literature. Short abstracts are given of many important papers, and the matter is arranged under appropriate headings of medicine, obstetrics, anatomy, etc. This publication will be found of great service to the readers of this journal.

THE ALLEGED RETURN OF LA GRIPPE.—It has been stated that several cases of influenza have recently occurred in London, England. On investigation, however, there seems to be but slender foundation for the report. One leading practitioner there, however, had under his observation four cases of influenza occurring in one family early in September.

CORRECTION.—By an unfortunate printers' error in the report of the proceedings of the meeting of the American Association of Obstetricians and Gynæcologists, in last issue, the words "liver" and "kidney" were transposed in Dr. M. Price's case of gunshot wound of the abdomen.

Meeting of Medical Societies.

THE TORONTO MEDICAL SOCIETY.

October 2nd, 1890.

The President, Dr. Spencer, in the chair.

The President delivered an address in which, after thanking the members for his election, he referred to the work which had been done by the society in the past, and expressed the hope that even better work would be accomplished during the present session. He suggested some alteration in the programme so as add greater variety to the proceedings; an evening might be devoted to medico-legal discussions when some of the more prominent men at the bar might be induced to attend in order that opinions might be expressed from a legal standpoint; another evening might be devoted to

social intercourse, when light refreshments would be provided, and the proceedings throughout be of an informal and convivial character. The President suggested that from among our members we should form the nucleus of a medical defence union, similar to those which exist in other countries, so that if any one of our members should become involved in legal difficulties his case should be thoroughly investigated, and the aid of fellow practitioners tendered to him if necessary. The President closed his address by expressing the hope that each individual member would do his best to advance the interests of the society.

The President was followed by Dr. R. A. Reeve, Dr. J. E. Graham, and Dr. T. C. Covernton, who each addressed the Society, giving an account of their recent experiences abroad, referring specially to the International Congress held at Berlin.

October 9th, 1890.

The President, Dr. Spencer, in the chair.

Dr. Dame showed a placenta to which two fœtuses has been attached, one had died at the the third month of gestation, the other at the seventh month. There was a history of a fall three months before delivery which might have accounted for the death of the fœtus at the third month.

Dr. A. A. Macdonald presented a small bottle full of calculous debris which had been passed from time to time by an old gentleman aged 80. Attacks of renal colic came on at irregular intervals followed by the passage of the calculous material; the urine was always of acid reaction.

Dr. Cameron presented six facetted calculi, all of equal size, measuring about half an inch in diameter. They were removed from a man aged 60.

Dr. Grasett presented a multilocular cystic ovarian tumor, and Dr. Cameron presented a similar specimen.

Dr. R. A. Reeve exhibited a patient suffering from exophthalmos. This case was of very great interest, and the following history was narrated: The patient, a young man, was kicked on the right lower jaw by a horse; he sustained a fracture of the jaw just in front of the masseter muscle, he was not rendered unconscious; two days after he suffered from tinnitus aurium on the right side, and this has been constant since; this was at first of a shrill character, now a whirring sound, aggravated when he lies down; five weeks after the accident when fixation apparatus was removed, he observed a protrusion of the right eye, this has since continued; he suffers discomfort but no pain; there is double vision; he has paralysis of the external rectus and cannot move the eyeball outwards. The displacement of the globe is forwards, downwards, and outwards; the eye jumps forward one millemeter during each pulsation; the eye can be forced back into the orbit if pressure at the same time be applied to the common carotid; thrill and bruit are distinctly heard on auscultation over the right side of the head; there is engorgement of the vessels of the eye and œdema at the inner canthus, there is, too, some hyperæmia of the conjunctiva. The term exophthalmos describes some of the symptoms but not the diagnosis. Many years ago the condition was said to be due to aneurism of the ophthalmic artery, but, in the light of our present knowledge, we know that this is extremely doubtful. In twenty-one post-mortem examinations only three exhibited aneurism. There is usually a lesion of the internal carotid artery and a communication established between the internal carotid artery and the cavernous sinus, so that the blood current forces its way into the ophthalmic vein and its branches and to the angular and facial veins. Many cases are due to traumatism, other cases are due to a form of trauma, as expulsive efforts during parturition. The treatment may be that of ligature of the common carotid artery. Fifty-five per cent. have thus been cured; of fifty-four cases, eight died. Digital compression may be tried. There are a number of cases of spontaneous recovery. In the case under consideration there is no pain, and the symptoms are not urgent, therefore a formidable operation is not justifiable. He is at present having digital compression applied over the common carotid, and the administration internally of iodine of potassium and ergot. The condition of the eye differs from that which persists in exophthalmic goitre, in that the lid moves downwards with the globe, whereas in exophthalmic goitre

the movement downwards of the upper lid is delayed. The use of styptics or the introduction of needles into the orbit is not to be recommended. With regard to the dangers consequent upon the formation of a coagulum or an embolus, however, one must remember that the blood current in the veins involved would tend to carry particles away from the brain instead of towards it, and, therefore, the dangers consequent upon the formation of a coagulum in ordinary aneurismal dilatations does not exist here.

Dr. Cameron preferred the term proptosis to exopthalmos in such a case. He did not think that ergot would be of much value in the treatment, and asked Dr. Reeve if a restricted dietary might not be advantageously combined with the administration of the iodine of potassium?

Dr. McPhedran, Dr. MacCallum, Dr. Pepler, Dr. Primrose, and Dr. Grasett discussed some points in the case and Dr. Reeve replied.

October 16th, 1890.

The President, Dr. Spencer, in the chair.

Dr. Spencer showed the stomach of a man who had committed suicide by taking some corrosive poison. The stomach was full, the mucous membrane of the œsophageal end was white, a large portion of the remainder of the mucous membrane was denuded and a portion congested; the lips, fauces, and œsophagus, exhibited whitened patches.

Dr. Acheson read his paper on

PEURPERAL CONVULSIONS

which appears at page 489 of THE CANADIAN PRACTITIONER.

Dr. A. Wright said that puerperal convulsions in his opinion were not the same as uræmic; there were some points of difference in the symptoms, *e.g.*, the temperature in the former rises very high, whereas in the latter it is usually subnormal. The preventive treatment is the more important; he administers epsom salts and iron tonics in puerperal dropsy, and if convulsions supervene, the administration hypodermically of large doses of morphia has proved most beneficial.

Dr. Machell spoke of three classes of cases. 1st. The full blood, where bleeding might be justifiable. 2nd. The anæmic and weakly patients, where morphia and chloroform would be useful, and bleeding not justifiable. 3rd. Where the exciting cause is nervous, occurring particularly in young girls with illegitimate children, often no albuminuria, and the kidneys healthy. Chloroform would be indicated in such cases. Dr. Machell condemned a routine form of treatment and advocated treating each case on its merits.

Dr. A. A. Macdonald referred to the use of croton oil as a quickly acting purgative, and the administration of chloroform during the convulsions.

Dr. Spencer and Dr. Carveth also took part in the discussion, and Dr. Acheson replied.

Pathology.

IMMUNITY.

Now that the germ theory of their origin has fairly been proven in connection with a number of the more important diseases, and also that inoculation with an attenuated form of the virus, or a previous accidental attack of the disease itself, protects from future attacks in certain of these troubles, without any appreciable risk to the patient's life, the question naturally presents itself, "What is it that protects the inoculated animal?" Not that this problem has not suggested itself before and answers been attempted; but only recently, and as a result of advances in bacteriology and chemistry, has an answer based on experiment been possible.

Four theories have been suggested, in favor of all of which something can be said. It has been held—

1. That by an attack of an infectious disease, or by inoculation, a chemical substance is produced in the animal organism which prevents a recurrence more or less surely.

2. That the micro-organisms introduced consume a certain pabulum existing in the tissues, and in so doing render them unfit to support another growth of the germ, and, therefore, forbid a future attack.

3. That the tissues of the animal body naturally resist to a greater or less extent all disease germs, in virtue of an hereditary endowment. This theory accounts for *natural* immunity only, not for *acquired*.

4. That the leucocytes are able to combat to a certain extent the invading germs. This is Metchinkoff's theory, and seems properly to fall under the third division. The weakness of this as a complete explanation is evident.

There appears to be no doubt that in certain cases the leucocytes do attack and make away with bacteria, as, for example, the leucocyte of the frog and the anthrax bacillus at an ordinary temperature. One can imagine this theory accounting for the *natural* immunity which certain individuals possess with regard to certain diseases, but by no means for *acquired* immunity.

A number of workers have recently been publishing their results, and it looks as though the knot were presently to be untied. Amongst those who have had notable results, are Buchner, Roux, Wooldridge, and Hankin. Certain of these gentlemen have shown that immunity can be conferred as well by inoculation with a solution of the life products of germs, as with the microbes themselves. This has been called "Chemical Immunity" as opposed to "Vaccinal Immunity."

It was supposed that the ptomaines produced by the different microbes were concerned in the production of this so-called chemical immunity. Up to this time, however, no one has been able to produce immunity by inoculation with isolated ptomaines.

Hankin's work seems to go far to show that *albumoses* are the poisonous agents in germ diseases, and he has produced protection by using minute doses of the same material which in greater quantities cause disease. Thus we have definitely settled *one* method at least of artificially producing immunity.

With regard to natural immunity it has been demonstrated that blood serum kills certain bacteria. In this connection Hankin reports the discovery of what he has named a "Defensive proteid," viz., a globulin separated from lymphatic gland tissue. This has the power of killing anthrax bacilli. He thinks that this globulin is identical with a proteid separated from lymph cells by Haliburton.

Judging by these results, and the fact that the work is still being zealously prosecuted, we seem to be justified in looking for a not far distant settlement, by actual experiment, of many questions upon which we have hitherto theorized only.

J. C.

LANDRY'S PARALYSIS.

In November, 1889, Centanni reported the discovery of a micro-organism in a case of Landry's paralysis. This was in the form of a bacillus, present in great numbers, and located in the peripheral nerves. The changes induced by the germ were those of acute interstitial neuritis,—ascending. Slight changes, if any, were found in the spinal cord. More recently (May, 1890) a case has been reported in the *Brit. Med. Jour.*, and the pathology suggested in this case is quite different. The reporter suggests (from clinical study) that the phenomena are the result of a gradual effusion of fluid into the central canal of the spinal cord with consequent pressure effects; the distention of the canal taking place from below upwards of course. The cause of the effusion is supposed to be congestion resulting from a chill.

J. C.

Correspondence.

Editor of THE CANADIAN PRACTITIONER:

SIR,—Upon first reading your remarks in PRACTITIONER for Aug. 16th, I looked on them as an adverse criticism to my communication. A closer perusal makes them appear in a different light, and with most of them I agree. My object in writing that article was to dissent from what I consider a too meddlesome midwifery, as taught in a paper read by Dr. Temple at the Ontario Medical Association, and since the writing of my first article emphasized with even greater stringency by Dr. Cameron, before the Canada Medical Association. Each of these leaders, in their papers, insist on the use of bichloride solutions, injections, and washings with pharasaical minuteness.

Cleanliness in all things is a *sine quâ non* to success in midwifery. But bichloride solutions are not everything; indeed, they are not without danger, even in the hands of the most skilled, and with the unskilled or ignorant may do much harm. The person of the surgeon and the body of the patient may both be antiseptic, and still if the discharges are allowed to soak through on to the mattress or even carpet of room, if this has not been removed, decomposition will take place, germs will be produced, and fever will be the result.

But how is this possible with macintoshes, blankets, and all other conveniences? Well, it is possible, but not probable. But many have not these appliances and still have babies. And if they have them delays take place and the baby is on hand before the bed is prepared, the bed becomes soiled, and if great care is not taken to see that all is removed, and everything clean and dry, a very serious condition of affairs may soon be the result.

Homœopathy in medicine was the result of over-medication and too little knowledge of the power of nature to cure herself. As surgery, and with it midwifery are now being taught, we will soon require a Hahnemann there too. I wrote my article, not with the intention of posing as any such a hero, but only to give the result of my eleven years' practice in the every day routine, knowing the use of all the best drugs and most approved appliances, and using them when necessary, but also allowing nature to work in her own field and often in her own way.

I would like to hear from some of my fellow plodders, and then from those who use all the minutiæ as prescribed by our specialists, compare the two results, and from these comparisons build up a common-sense practice.

You say that some great minds cannot grasp the simple instructions as to cleanliness in midwifery. I think that a truly great mind will not only grasp them, but also carry them out wherever necessary, and at all times will recognize nature's powers, and not ascribe to medicine work done by nature.

But many small minds spend all their time in seeking for the infinitesimal, which found in the form of a bacillus, a microbe, or other germ life, will deify it, and pay their daily devotions to a congenial spirit.

J. JARDINE, M.D.

541 Dundas St., London, Oct. 8th, 1890.

Editor of CANADIAN PRACTITIONER:

SIR,—Since a relation between malaria and hæmoglobinuria is considered as not unlikely, and some Italian physicians have gone so far as to state that they believe the large amount of quinine, which they are in the habit of giving, may be an important factor in producing hæmoglobinuria, I thought it would be of interest to relate my observations in the treatment of the late epidemic of influenza. In all my cases I employed small doses of quinine, the maxium dose for an adult being in no case exceeded by five grains, and this given only once, followed by two or three grains after an interval of six or eight hours; the first dose was successful in all cases in relieving the pain completely within half an hour, so that the patients desired no more treatment except when the attack was followed by a cough, when an expectorant was usually employed. Children were given smaller doses in proportion, with a like happy termination of the most distressing feature of the malady. Now, where other practitioners gave larger doses of quinine, as ten grains or more, the symptoms were in no way ameliorated but were rather intensified, besides the disease lasted a considerable time, accompanied by the severe pains, even when there were no complications. Also in the cases treated by other physicians with other remedies, notably, antipyrin and similar analgesics, the urgent symptoms were slightly improved from time to time as the remedy was employed, but they did not seem to limit the duration of the attack in the least. Besides, those treated by the latter remedies seemed to be followed by a greater number of and more serious complications, whereas those treated by small doses of quinine were followed in my hands by exceedingly few complications, and these mostly of a bronchial character, and all recovered in a short time, to my great satisfaction. The highest temperature in my cases of influenza was $104\frac{5}{2}°$ noted in two cases, one in a girl of fifteen, and the other in a woman of forty years of age, and the lowest two or three degrees below normal, in a man of fifty-seven following a somewhat severe attack of angina pectoris. A great many have told me that treatment in the influenza was of no use, but I can not believe it after an experience as detailed above.

Yours truly,

F. T. BIBBY.

Port Hope, Oct. 17th, 1890.

The civil, military, and naval departments of the British Government are supplied with the Fairchild Digestive products, and the Fairchild preparations for the predigestion of milk, etc, are especially preferred in India.

Book Notices.

A Text-book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By H. A. Hare, M.D., Professor of Therapeutics in the University of Pennsylvania. Philadelphia: Lea Brothers & Co.

This is the very work one would expect from the author of it; a judicious combination of the scientific and practical, such as every intelligent physician desires and appreciates. The hand of the clinician and the physiologist is evident in it.

Reviews.

The Science and Art of Obstetrics. By Theophilus Parvin, M.D., L.L.D., Professor of Obstetrics in Jefferson Medical College, Philadelphia, etc. Second edition, revised and enlarged. Philadelphia: Lea Brothers & Co.

The first edition of Parvin's Obstetrics appeared four years ago, and was very favorably reviewed by medical journals in various parts of the world, including THE CANADIAN PRACTITIONER. It is a very excellent book for both student and practitioner, and has been largely used as a text-book in many medical colleges in the United States. In Canada it has not replaced Playfair or Gallabin, which are the favorites with students and teachers. The present edition shows a few changes and additions which are not, as a rule, very important; but they are sufficient to bring the book fully abreast of the times in all respects.

Pamphlets and Reprints.

Arsenite of Copper. By John Aulde, M.D., Philadelphia.

The Use of Rhus Toxicodendron. By John Aulde, M.D.

Clinical Reports on Arsenite of Copper. By John Aulde, M.D.

On the Treatment of Eczema in Elderly People. By L. D. Bulkley, A.M., M.D., New York.

Is There a Fundamental Difference Between the Contraction of the Heart and Ordinary Strained Muscle? By Thomas J. Mays, M.D.

Suggestive Therapeutics — a Treatise on the Nature and Uses of Hypnotism. By H. Bernheim, M.D., Professor in the Faculty of Medicine at Nancy; translated by A. Herter, M.D. New York and London: G. P. Putnam's Sons.

Professor Bernheim, in common with the Nancy School, claims that hypnotic sleep is not a pathological sleep; that the hypnotic condition is not a neurosis, analogous to hysteria.

Now that the daily press is being filled with accounts of the dangerous possibilities of hypnotism in the hands of criminals, there is special interest in the positive statement of the author that no one can be hypnotized unless he has the idea that he is going to be; that anyone that does not want to be hypnotized, and who knows that he need not be influenced if he does not wish to be, successfully resists every trial.

Anyone will be interested in the reading of this book, even should he conclude, as does Sir Andrew Clark, that in fifteen years hypnotism will be as dead as mesmerism now is.

Personal.

DR. CARSON, of Toronto, sailed for England on October 11th. He was very ill at the time of his departure.

Dr. L. MCFARLANE returned to Toronto on Monday, Oct. 20th. After the receipt of injury (a compound fracture of the leg, about three inches above the ankle joint), he remained five weeks in Brooklyn. The union was not thought to be very firm, but a plaster splint was applied, and the doctor completed his journey to Toronto without any mishap. He is doing well and expects soon to get out on his rounds.

Births, Marriages, and Deaths.

BIRTHS.

GRANT—On Oct. 11th, at Ottawa, the wife of Dr. J. A. Grant, jr., of a daughter.

SMELLIE—At Port Arthur, Sept. 28th, the wife of T. S. T. Smellie, Esq., M.D., of a son.

MARRIAGES.

RUTHERFORD—MAXWELL — At Morrisburg, October 13th, D. B. Rutherford, M.D., of Belleville, to Isabel, eldest daughter of Frank B. Maxwell.

SUTHERLAND — RICHARDSON — At Toronto, on October 7th, R. Ross Sutherland, of Winnipeg, to Miss Nan Richardson, youngest daughter of Dr. Richardson.

GREGORY—PATTULLO—At Toronto, on Wednesday, October 15th, 1890, Walter Dymond Gregory, barrister-at-law, to Mary Frances, eldest daughter of Dr. Pattullo, of Toronto.

REYNOLDS—LOGIE—On October 22nd, at Hamilton, Thomas William Reynolds, M.D., Assistant Superintendent of the Hamilton Asylum, to Mary Lawrason, second daughter of the late Alexander Logie, Esq., Judge of the County of Wentworth.

Miscellaneous.

REPORT OF THE NEW YORK PASTEUR INSTITUTE.

Dr. Paul Gibier, director of the New York Pasteur Institute, begs to inform you of the results of the preventive inoculations against hydrophobia performed at this institute since its opening (February 18th, 1890).

To date 610 persons, having been bitten by dogs or cats, came to be treated. These patients may be divided in two categories :

1st. For 480 of these persons, it was demonstrated that the animals which attacked them were not mad. Consequently the patients were sent back after having had their wounds attended, during the proper length of time, when it was necessary. Four hundred patients of this series were consulted or treated gratis.

2nd. In 130 cases the anti-hydrophobic treatment was applied, hydrophobia having been demonstrated by veterinary examination of the animals which inflicted bites or by the inoculation in the laboratory, and in many cases by the death of some other persons or animals bitten by the same dogs. All these persons are, to-day, enjoying good health. In eighty cases the patients received the treatment free of charge.

The persons treated were: 64 from New York, 12 from New Jersey, 12 from Massachusetts, 8 from Connecticut, 9 from Illinois, 3 from Missouri, 3 from North Carolina, 3 from Pennsylvania, 2 from New Hampshire, 2 from Georgia, 2 from Texas; 1 each from Maryland, Maine, Kentucky, Ohio, Arizona, Iowa, Nebraska, Arkansas, Louisiana, and Ontario, Can.

With kindest regards of the Pasteur Institute,

PAUL GIBIER.

New York, Oct. 15th, 1890.

Chicago Policlinic.

THE SECOND SPECIAL

Course for Practitioners

—ON—

ABDOMINAL AND PELVIC SURGERY,

—WITH—

Demonstrations upon Dogs and Cadavers,

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174 E. Chicago Ave., Chicago.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

☞ Business Management, - THE J. E. BRYANT COMPANY Limited, 58 Bay Street.

TORONTO, NOVEMBER 17, 1890.

Original Communications.

THE FAILURE OF THE REMOVAL OF THE TUBES AND OVARIES TO RELIEVE SYMPTOMS.*

BY JAMES F. W. ROSS,

Lecturer on Diseases of Women, Woman's Medical College, Tor.;
Lecturer on Abdominal Surgery, Toronto University;
Gynæcologist to Toronto General Hospital;
and Surgeon to the Woman's
Hospital, Toronto.

In selecting this subject as my ground for a paper, I determined to throw together, roughly, some facts that have come under my own observation in the last four years. It is a well-accepted fact among sportsmen that a spayed bitch is stupid, listless, and lazy; that she loses interest in her work and becomes almost useless to the gunner. I believe that removal of the ovaries of women, in some cases, interferes with their intellectual capabilities and diminishes their intellectual calibre, even if it does not remove or diminish their sexual desire. It is not such a very important matter that a woman should be endowed with sexual longings, but it is very important that her companionship should be unimpaired by any loss of mental vigor. We hear a great deal about the marital grievances based on this absence of sexual feeling, but I believe that fully one-half of the married women are almost devoid of sexual passion. Let us hope that in a civilized community this is not the chief exactment of man, but that he looks to woman to be a bright and cheerful companion, a ready counsellor, and a help in the hour of suffering and trouble. Our object, as physicians and surgeons, is to relieve suffering. When suffering and semi-invalidism are due to pelvic inflammation that can be relieved by operation, then we should undoubtedly operate, even though the woman be unsexed. But to operate on organs not diseased for the relief of indefinite pain symptoms, hysterical symptoms, cataleptic symptoms, epileptic symptoms, is to my mind unjustifiable. A craze seems to have taken hold of the profession. The axiom seems to have become: "If a woman has indefinite pains or pelvic symptoms that you cannot account for, take out her ovaries." This axiom requires a radical change. Every case that complains of indefinite pelvic troubles should be taken into a hospital, or watched resting quietly at home, attended by an experienced nurse for a month or six weeks. Valuable information as to the actual amount of pain suffered will be in this way obtained. Examination should be made by an experienced finger under an anæsthetic. It is thus impossible that a dilated tube or an enlarged ovary can escape the finger, or that adhesions be present without being discovered. If no definite enlargement or "boggy" matting together of the parts be felt, then I hold that the ovaries and tubes should be left alone. Ovaries with little fibroid nodules, broad ligaments with little cysts hanging from the tubules of Kobelt, or the

*Read before the Canada Medical Association, at Toronto, September, 1890.

little enlarged hydatid of Morgagni, do not give rise to symptoms and are to be found, in my belief, in the pelves of most women, and have been made the scapegoats for many of these operations when the nervous system has been really at fault. I believe that a simple catarrh of the tube takes place periodically once a month in the tube on the side on which the Graafian follicle is about to burst. I have opened a large number of these tubes at the operations of others, and have found on two occasions in the tube on one side, corresponding to the ovary developed for the next menstrual period, a collection of clear tenacious mucus. In these cases the ovaries have been non-adherent, have never been surrounded by any inflammation, and to my mind were perfectly healthy. I have seen these unjustifiable operations done both in Europe and America. Fortunately, as after every new procedure, we are now able to glean what is good and throw away what is bad. It is my intention, by the aid of the specimens I show you and the cases related, to draw, to my own satisfaction at least, a dividing line between these two sets of cases.

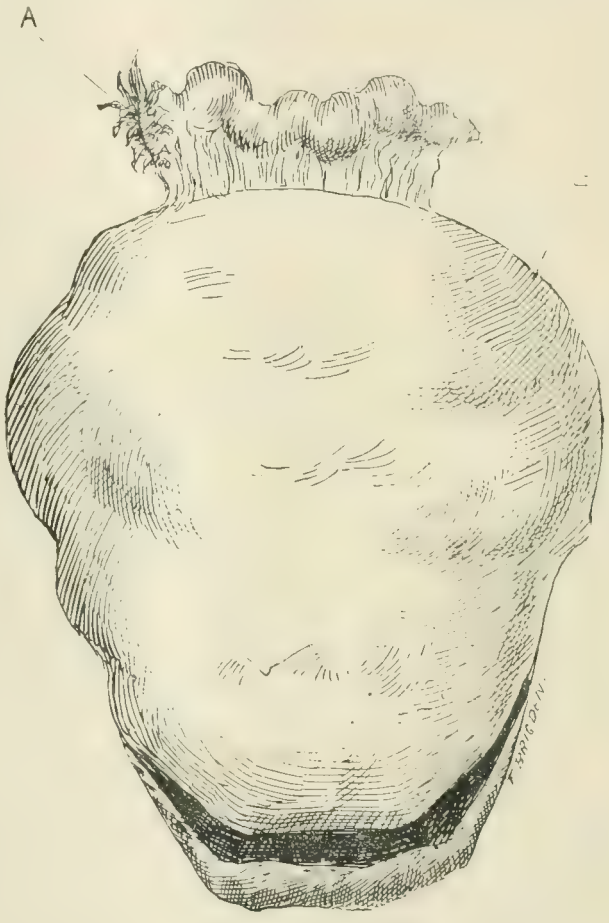

PLATE No. I.

A. Healthy Fallopian tube. *B.* Fibroid ovary, size of a goose egg.

I can prove by this specimen *(Plate I.)* of a fibroid ovary that much change may go on in any ovary and produce no symptoms. The patient came to me for the relief of a hernia and asked me if I could tell her why she was sterile. She had been five years married. It was alone on that account that I examined her, found this mass, diagnosed a fibroid ovary, and removed it a week ago. We all know that ovarian tumors develop with and without pregnancy without giving rise to any particular train of symptoms. Small ovarian tumors may be painful or give rise to no pain. They may give rise to pelvic inflammation or to no pelvic inflammation. My friend, Dr. McFarlane, had a lady under his care for years, both prior to and subsequently to her marriage. She was about to be confined of her fourth child, and as usual, sent for him. Her health had always been good and her married life happy. After he arrived at the house she suddenly developed symptoms of rupture of the uterus, and was dead in twenty minutes. On *post mortem* examination he found the uterus ruptured. He also found a cystic ovary as large as a goose egg. It was non-adherent. She never had any symptoms to point to its presence.

I will now quote one case from my own experience to prove that a small ovarian cyst may give rise to very curious symptoms and without having contracted any adhesions. A lady, five years married, had two natural labors; she consulted me about an uncomfortable feeling in the pelvis; she had been treated for flexions, prolapse, etc., since girlhood, at the hands of various physicians; I do not doubt that the tumor was gradually but slowly increasing in size at this

time, but was perhaps not large enough to be detected; after marriage she bore two healthy children without difficulty; before I saw her she had been put to torture by the insertion of a Hodge pessary to hold up a supposed retroflexed uterus; when she first menstruated at from sixteen to seventeen she had no pain; was never very regular; three weeks before marriage had "inflammation of the bowels," brought on, she was told, by sudden falling of the womb; she was sick at the time of marriage with pains in her back and legs, and felt as if she was losing the power of her legs; she weaned her last child in March and was unwell on May 4th; it lasted six days; menses came on again June 20th, and she continued unwell until I saw her; clots passed, and something like a "little bladder" came away; she believed she had a miscarriage; she subsequently had pains across lower abdomen; pain on sitting down more about rectum; coition very painful. On examination I found a tense mass in right parametrium, dropping in towards curve of sacrum, probably ovary; uterus enlarged; erosion of os. On exploring I found the right ovary enlarged to size of an orange, and removed it; there were no adhesions; she has been in robust health since, and is as cheerful and bright as ever. In this case I removed but one ovary. In another case of ruptured ectopic gestation, I removed but one ovary and tube; the patient then bore another child; and five months ago, three years after the first operation, I removed the other side for tube disease. In other cases I have removed but one ovary, and I may here state that in all cases, unless there is marked evidence of disease of the opposite side, I intend to leave the apparently healthy structures behind. In the case of fibroid ovary just related, it would have been absurd to have removed the other ovary and thus spoil all chance of a subsequent pregnancy. If this holds good with one form of ovarian tumor, it equally applies to another. There is a very marked difference in the mental condition of patients from whom only one ovary has been removed and of those from whom both have been taken. The experience of savage nations does not tally with that of civilized people. It is said that women castrated among aboriginal tribes of the South Pacific become thin, strong, active, and wiry, and are better able to stand fatigue. My limited experience has been the reverse of this.

There can be no doubt that removal of both ovaries produces a profound nerve change, while removal of one does not seem to produce any such change. It would be interesting to ascertain whether this change occurs equally in those in whom menstruation is and is not entirely stopped by castration.

That neither ovaries, nor tubes, nor the large plexus of nerves in the broad ligament so beautifully demonstrated by Frankenhauser some years ago, exert the sole or whole influence that produces menstruation, is proved by the case reported by Tait. In that case a supra-vaginal utero-ovario-tubal amputation was performed, and though but a small stump of cervix was left, the woman still continued to menstruate from the stump.

I wrote sometime since to my friend Prof. Gaule, Professor of Physiology, at Zurich, for some explanation of this phenomenon. We had often talked the matter over together. In reply, he says that his belief, as set forth some years ago, is that the cells of all organs retain a certain intimate connection with one another, a connection first occurring during embryo life. That is, that certain cells of the blood, of the nerves, of the glands, of the connective tissue, etc., correspond with one another because formed at the same period of time and bound together through certain prevailing structural laws. Take, for instance, the spinal cord as to its fibres. He concluded from a long series of observations that in the frog one fibre of a nerve root corresponds with eleven fibres in the spinal cord, and that these are necessary to carry on the many functions, and to provide against contingencies that may arise. In the ovaries and uterus every cell corresponds to a certain number of cells in the blood, in the nervous system, etc., that belong to the same "litter," that is, were developed at the same period of embryo life. When the ovaries and tubes are removed, these corresponding cells remain behind and give rise to certain sensations and phenomena that existed before the ovaries and tubes were removed, somewhat as neuralgic pains occur in limbs that have been amputated. Hence many cases in which ovaries and tubes are removed to

relieve certain nervous symptoms remain unrelieved. Many suffer from the old pains, others continue to menstruate, and in some menstruation ceases at once and an early menopause is induced. I have one case suffering as intensely as before the removal of the ovaries and tubes from dysmenorrhœa. She had what is called an infantile uterus, with an extremely long neck; the fundus turned over into the *cul de sac* of Douglas. Her pains were unbearable and she was beginning to take too much opium. I removed her ovaries. She has become violently hysterical since, and is more incapacitated for work than ever. She menstruates regularly. Many cases I hear of as cures are not cures. The surgeon loses sight of them. Even if he does ask them about their health, it is doubtful if he always receives a truthful answer. I have known a woman, hardly ever well after the removal of her tubes and ovaries, state that she was much better. The friends who see these cases every day ought to know something about their condition, and their statement is more to be believed than the reply given by the patient herself. From our many failures to remove nervous diseases as hysteria and epilepsy by castration, we can see that the ovaries play but a part in their causation; and I believe that we might as well hope for relief of these diseases by enucleation of both eyes as by removal of both ovaries, or both tubes, or both tubes and ovaries, or even both tubes, ovaries, and uterus. I know one husband who would give all he possesses to have his wife's ovaries and tubes replaced. She has her pains, she has her nervous symptoms, but has lost her energy, and is in a worse condition than before operation.

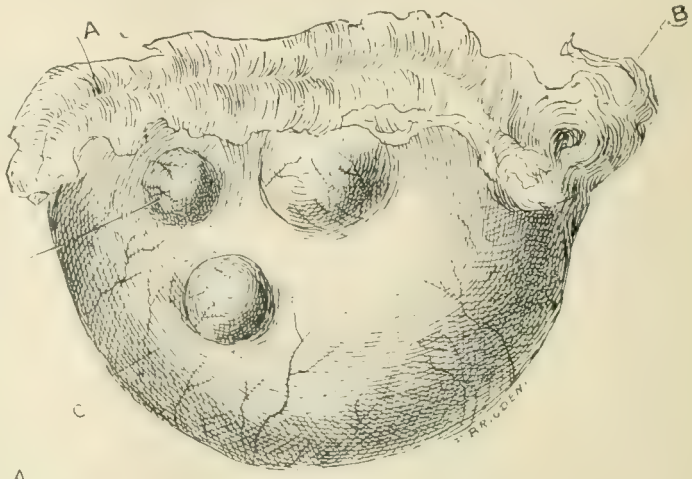

PLATE No. II.

Right and Left. Removed from a woman ill four years with attacks of so-called pelvic cellulitis.

RIGHT SIDE. *A.* Tube opened, not much thickened. *B.* Fimbriated end. *C.* Cystic ovary; held about two ounces bloody fluid, a blood cyst. *D.* Smaller cysts.

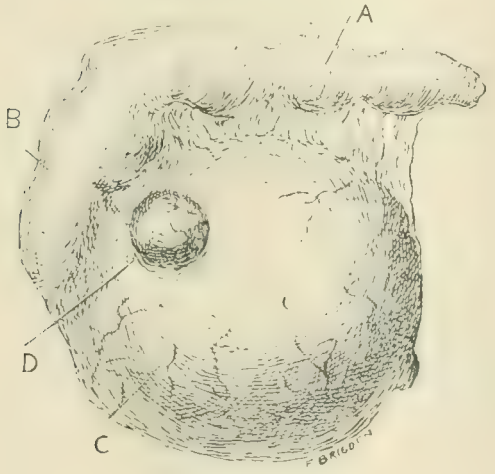

PLATE No. II.

LEFT SIDE. *A.* Tube slightly enlarged. *B.* Fimbriated end, ending in a tubo-ovarian cyst. *C.* Cystic ovary, containing serous fluid. *D.* Small cavity filled with pus.

Now to look at the other side of the question, where operation and operation alone is imperatively and urgently called for. I firmly believe that the tubes have more to do in the causation of pelvic inflammation of the recurrent and most distressing type than the ovaries, and there is no reason why we should not, in suitable cases, remove the tube and leave the ovary.

(Plate II.) Here are two ovaries and tubes removed, ten days ago, from a patient who had been allowed to suffer for six years. Many thought she was simply hysterical. But she had good cause to be hysterical. Her trouble originated in the ovaries. She had a small ovarian cyst on each side, each had given rise to inflammation, and tubes and ovaries became matted together, so that at the operation it was with great difficulty that I could get beyond the brim of the pelvis.

I show in Plate III. ovaries and tubes matted together. The disease in this case was, as can be seen at a glance, primarily and chiefly tubal. I could relate many other such cases—cases allowed to suffer on owing to a prejudice in the mind of the physician to such operations. Many cases go the rounds, as these did, with a "matting" of their pelvic organs diagnosed as that indefinite misnomer "pelvic cellulitis," deluged with hot water, charged and recharged with electricity, curetted and cauterized, until at last they come into the hands of some one whose experience of the pelvis is *from within* and *not without*, and such tubes and ovaries are removed and the patients permanently cured. There is too much tinkering in gynæcology. These are the cases that should be referred to the specialist without going the rounds of iodine applications and glycerine tampons. With such a condition of tubes and ovaries as I show here, nothing but an operation will cure the patient. To be sure they may go round in a wretched, broken-down condition, a worry to their husbands and families, peevish, fretful, irritable, until at last the menopause sets in, when their health improves; but this happy result might have been brought about many years before. I am well aware that the skeptical and theoretically informed say: "I know such and such a case cured after operation had been advised"; and they bring such a flimsy apology for an argument to weigh down the general weight of experience of the abdominal surgeon—*the worker from within*. Accurate diagnosis in many cases is impossible until the abdomen has been opened but in each case in which this matting of the organs is to be felt per vaginam under an anæsthetic, the experienced finger inside the abdomen will soon recognize the nature of the condition present. In many cases it is only the experienced finger that is of any use; the inexperienced would at once determine that parts were so matted together that nothing could be done; the woman would be closed up, or the parts would be pulled and peeled, important structures damaged, the woman would die and our art suffer. In my second case of abdominal operation my inexperienced fingers tore the ureter, the pus tubes I then thought could not be removed, were not removed, and the patient died in forty-eight hours. I then learnt a valuable lesson. With each operation I feel more at home in the pelvis. Patients with hardly any pelvic peritoneum left (as seen in Plate

PLATE No. III.

Right and Left. Disease of Fallopian tubes, from patient ill six years with so-called pelvic cellulitis.

RIGHT.—*A*. Ovary with old corpora lutea. *B*. Fallopian tube, much thickened and diseased, laid open. Three or four times thicker than normal. *C*. Fimbriæ not to be discerned, but tube ending in clubbed extremity.

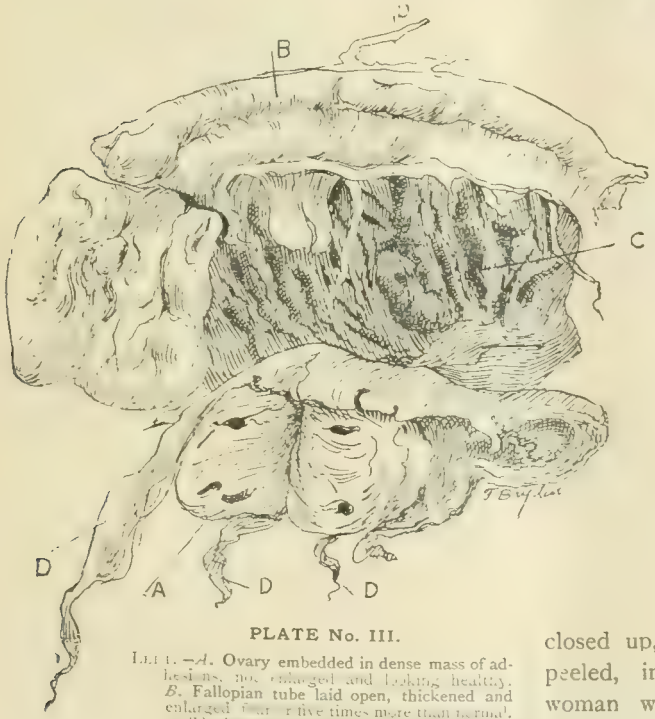

PLATE No. III.

LEFT.—*A*. Ovary embedded in dense mass of adhesions, not enlarged and looking healthy. *B*. Fallopian tube laid open, thickened and enlarged four or five times more than normal. *C*. Thickened mesosalpinx with *D*. Innumerable sheets and bands of adhesions to be drawn or enucleated out.

III., left) recover without a bad symptom as long as the parts are kept aseptic; as long as no important structure is injured, the bleeding controlled, and pelvis cleared out. I record these facts to show you that I am in favor of operation in certain cases. Now to look at another feature of the question—a rare case, in which no matting or marked enlargement of the pelvic organs was present and yet serious disease existed, found upon exploring the cavity of the abdomen, forming an exception to the rule I have laid down. I will now relate the same and show the ovaries removed *(Plate IV.)*

PLATE No. IV.

One of two ovaries removed from patient. Case recorded. Ovary riddled with pus cavities. A. One of the abscess cavities.

This is the only case in which I have found abscess of both or one ovary unaccompanied by pelvic inflammation. Such cases may therefore occur. The patient was a great sufferer and the result of operation has been satisfactory. The ovaries were but slightly enlarged and non-adherent. I show them here. They were extremely tender. I believe that occasionally in some cases the abdomen may be justifiably opened, the ovaries examined, and if found apparently healthy, left alone. Because an operator opens the abdomen, it is not necessary for him to remove the ovaries so as to make one error bolster up another. Let him be courageous enough to leave them alone when to the eye they appear healthy, and look elsewhere for a cause for the symptoms. This patient then was a lady twenty-eight years of age. She was first seen by me in August, 1885. Married eleven years, and had borne four children, giving birth on the last occasion to twins; recovery on the last occasion had been protracted; appetite was poor; occasional nausea; dysuria; menstruation every two weeks; suffers pain in left groin; when walking has a bearing down pain; pain in back; aching in limbs; "cramps in the stomach," which are very severe; painful defœcation. On examination I found (these cases are extracted from my case book, and are given as written at the time) vagina normal; perinæum lacerated, not complete; uterus in first stage of prolapse; sound enters three inches; not tender; urethra, anus, and rectum, normal; cervix thickened; both ovaries somewhat enlarged and to be distinctly felt; left larger than the right. On April 8th, 1886, nearly a year later, I find the same pain; headaches; uterus tender and more fixed, and can be readily seen by dilating vagina with fingers without a speculum; utero-sacral ligaments tense and tender; intense pain on coition; if she remains in bed, feels great relief from pain. On August 2nd, 1886, I find: pain all over "stomach"; when she turns on her right side, the pain shoots down to the anus; a piercing pain; dystocia; scalding on urinating; last unwell, July 10th; three days before it came on had pain, and a little dark spot appeared on the napkin; it then came on at the end of the three days profusely; clots; fine doughy nodular masses behind uterus, one probably larger than the other, very tender; feel like prolapsed ovaries, but too numerous; has had chills; sallow in color.

I removed the ovaries. Both were enlarged and riddled with cavities, many of which were filled with pus. The ovaries were non-adherent and there were no evidences of pelvic inflammation. Tubes were not enlarged. Recovery was perfect.

Aug. 24, 1888. In splendid health ever since operation. No erethism and never experienced any more than she does now, even with ovaries.

I saw this patient in January, 1890. She has gained flesh; begins to look gross. Puffy face. Suffers from headache, but otherwise feels very well. Her mental condition is not what it was before. She seems lazy, indolent and fat, and is not the bright little woman that she was before the operation, even when she had her aches and pains. Sexual intercourse is only indulged in as a marital duty. It gives neither pain nor pleasure. The operation was a necessary one and it relieved the pains; but whether the pains were due to the condition of the ovaries alone,

or to the prolapsed condition of a tender uterus drawing down tender ovaries, I am not prepared to say, but I think the sequel shows that the disease of the ovaries caused the pain. In this case the pains were relieved.

(Plate V.) I now show a specimen of simple single abscess of the ovary. Nothing but operation would have relieved such a case. She has been completely relieved since the operation done by my colleague, at the Woman's Hospital, Dr. A. Davidson.

I have but once removed the ovaries for the relief of a certain set of symptoms supposed to be due to ovarian irritation, ovarian adhesions, or to slight pathological changes in the ovaries, but symptoms that are undoubtedly due to other changes, changes that I firmly believe take place in the delicate structure of the spinal cord, and,

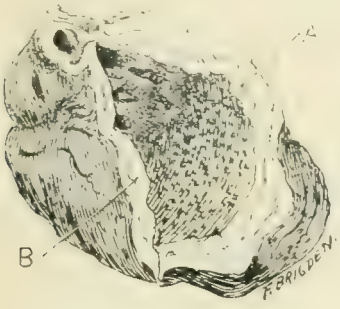

PLATE No. V.

Single abscess of ovary, from patient whose tube is shown in plate viii. Ill several years with so-called "pelvic cellulitis." *A.* Roughened inner surface of abscess cavity. *B.* Edge of wall cut out to show cavity.

as do all nerve changes, require a long period of time for their removal. Many deaths from these operations have been recorded. Many failures to relieve symptoms have not been recorded. I sincerely hope that this short paper may evoke such a discussion in this prosperous association as to give forth no uncertain sound, and that its opinions may be voiced abroad to add its small quota to our already extensive knowledge of this subject.

I will now relate my own isolated case, referred to above, and will then relate cases occurring in the practice of others and made use of with their consent.

A young woman, aged 22 years, was referred to me by my friend Dr. T. A. McKenzie. Her occupation was that of a night nurse, one that must try any young woman of her age and temperament. Her appearance was not robust. She was pale and evidently anæmic. Tonics had been given with but little success. Menstruation first came on at fourteen. She lost a large quantity, the discharge usually lasting seven or eight days. She complained of pain on motion, especially when going up or down stairs, or when she turned over in bed. Pain in the back and on the right side, in the neighborhood of the groin. There was very little pain on the left side. On examination, the uterus was found to be normal in size and density and freely movable. The parametrium was free. The ovaries were enlarged and tender. They were mobile and the right was prolapsed into the *cul de sac* of Douglas. The usual treatment recommended for such cases was adopted and faithfully carried out by Dr. McKenzie. After failing to give relief, I decided to remove the prolapsed

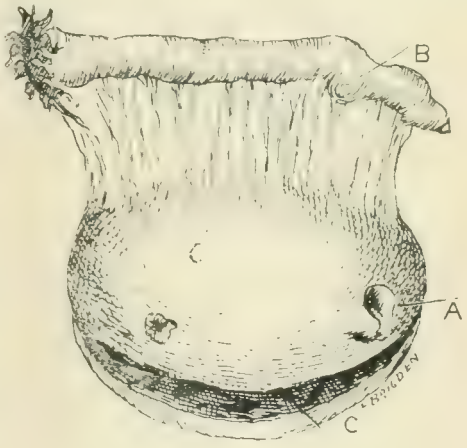

PLATE No. VI.

One of two ovaries removed for pain. *A.* Peculiar fibroid nodule, probably only a freak of nature and of no pathological significance. There were two such teats on the other ovary and one or two pendulous cysts from broad ligament. *B.* Fallopian tube quite normal. *C.* Ovary cut open. Patient not relieved by operation.

ovary, believing that the pain must be due to the abnormal position of the organ. There is no doubt that in man one testicle hangs lower than the other, and I have met with many cases in which the right ovary lies much lower than the left without giving rise to symptoms. This is a normal condition, owing no doubt to the absence of the rectum on the right side. The operation was performed two years ago. I showed the ovaries to this association, and asked Dr. Johnston, of Danville, Kentucky, present by invitation at the operation, to point out to us the nerve that he supposed held such a close relationship to the occurrence of menstruation. At

the operation the right ovary was drawn up, and though somewhat enlarged and with two minute growths, like little teats, protruding from its surface, it did not look much amiss. (*Plate VI.*) It was the general belief of those present that the organ was undoubtedly the cause of the pain and it was accordingly removed. The other was drawn up, and as it had also one of these little teats, it was also pronounced diseased and removed. On one side was one of those little cystic formations derived from the tubules of Kobelt, and this was said to be found in many similar cases. These little harmless pendulous vesicles seem to have incurred the enmity of some pathologists and have been branded with an anathema. I myself firmly believe that these vesicles will be found in fully half the number of healthy women. I also believe that such little teat-like excrescences have no pathological significance whatever; that they do not produce severe pain any more than do small uterine myomata, or small myomata developing in the layers of the broad ligament. The testicles undergo a great amount of change without producing pain, and so do the ovaries. The patient recovered perfectly from the operation.

On the 8th February, 1890, the patient was sent to me by Dr. McKenzie, suffering from pains in the left breast, nausea, pain in the right inguinal region as bad as before operation. She has only menstruated twice since the operation, in the first two months. She had an enlarged and painful gland under one arm; suffers from headache and flushes—these, of course, are expected to be present during the first two or three years. A herpes occurred over the left breast, evidently due to neuritis. She had severe pain before the eruption came on. On examination I found the uterus smaller and quite normal, but the left parametrium was as tender as before operation. There was no rise of temperature. She is mentally changed; has become melancholy and depressed; suffers from lassitude and feels always tired; rest does not refresh her. She tried a complete rest from work in the country for six weeks, without deriving any benefit from it. Appetite is very fair. Nothing seems to do her good. Her case never presented either hysterical or epileptic symptoms. Distinct symptoms of ulceration of some portion of the colon have developed. She has irregular diarrhœa; blood and mucus is passed, with symptoms resembling chronic dysentery.

I know of another such case in which oophorectomy was performed to relieve symptoms supposed to be ovarian, but where ulceration of the colon has since shown itself.*

I lately diagnosed a case on first examination as one of tender dilated tube curled behind the uterus, but on closer examination subsequently, under an anæsthetic, concluded that it was a tender empty lower portion of the omega flexure of the colon (erroneously called sigmoid flexure), and that it was ulcerated. Her symptoms have for some time simulated those supposed to be due to ovarian neuralgia. She has, however, been pregnant about as often as she well could be.

There is at present in a Canadian Home for Incurables a case with the following history: Æt. 35 years. Menses first appeared at 13 or 14 years of age; always excessive in flow and accompanied with pain; otherwise she was strong and healthy. At 16 an abundant leucorrhœal discharge began, and she suffered from ovarian neuralgia. Her disposition seemed to have changed at this time; she became nervous and hysterical. Eight years ago she entered an American medical institution for treatment. Both ovaries and tubes were removed. She does not know whether they were diseased or not; she fancies that they were not. Her pain and discharge ceased after the operation. For a year she was stronger mentally and physically. In October, 1885, she entered a Home for Incurables, and has been there ever since. She suffers no pain and has no discharge, either menstrual or leucorrhœal. She remains in bed all the time, merely getting up to wash. She cannot be induced to do more. Appetite abnormally large and she complains of being always hungry. Her chief complaint is that she suffers from "attacks of exhaustion," even while in bed. She starts upon hearing the slightest noise; readily becomes hysterical. Conversation is rational, but she cries a great deal. Suffers from headache. For this history I am indebted to my friend Dr. Ardagh, one of the house sur-

* NOTE.—During the discussion Dr. Imrie, of Detroit, mentioned a case of his operated on in Philadelphia (removal of appendages), that had developed exactly the same evidences of colon disease since the operation. Operation did not benefit her.

geons. Operation in such a case I consider unwise. A girl's prospect of marriage, maternity, and a happy life, are blasted for ever by such a procedure. The symptoms were not more severe than those met with in delicate, developing, anæmic young women, met with so frequently in practice, women who marry, bear children, and become most useful members of society, if but carefully looked after, properly fed and clothed, and guided by the good wholesome advice of the old-time type of family physician.

Two months ago I opened the abdomen of another case, but refused to remove ovaries or tubes. They were perfectly movable and healthy. The woman had borne six children in six years and the last one within fifteen months. Her symptoms were pain in back, in head, and in left groin; some pain in right groin; worse when she walks; cannot turn in bed; worse when turning to the right than to the left; pain severe when she lies on her back: when she stands up she cannot stand up straight; leucorrhœa. These pains have been present for two or three years. Has been under many doctors and obtained no relief. On opening the abdomen, for purposes of exploration, I thought I detected some feeling of thickening in front of the sacrum, but the uterus and ovaries and tubes were perfectly normal. No doubt the case is one of some organic or functional nerve lesion affecting the lumbar enlargement of the spinal cord, due either to actual disease of the spine or perhaps to an over-indulgence in sexual intercourse.

The nervous system of a woman seems to be more complex than that of a man. We have all met with curious cases. I have seen the menopause brought on suddenly and permanently by marriage. I have seen menstruation cease suddenly during lactation from grief, and amenorrhœa continue for three years and the breasts remain filled with milk during all this time. We have many severe nerve symptoms in women that we cannot as yet explain; we have endeavored to relieve them by removing the ovaries and tubes and have failed. In cases of atrophy of the ovaries the symptoms are—in the opinion of Dr. Annie Clark, so long associated with Lawson Tait—due to other causes, and no relief is afforded by oophorectomy. In cases of infantile uterus with good sized ovaries, I have tried galvanism, dilatation, and other methods, but with little if any benefit. In one case I have removed the ovaries and the patient has been worse ever since. (*Plate VII.*) I know that many cases operated on by abdominal surgeons come back several times after the operation complaining of their old pains. Obtaining no further relief and becoming uninteresting to the surgeon, they drift into other hands, after their cases have gone to swell the list of so called "cures."

I know of one woman who was delivered of a child after having both ovaries removed. Early pregnancy often gives rise to excessive pelvic tenderness, and is liable to mislead any of us into the opinion that serious pelvic mischief exists.

PLATE No. VII.

One of two ovaries removed for dysmenorrhœa in patient with infantile uterus, fundus in cul-de-sac of Douglas. Ovary and tube normal. Patient worse since operation.

Neuralgic conditions often exist in the pelvic organs of young women who are anæmic. If once they have been examined by the finger of the physician per vaginam, and have heard from his lips the words, "congestion of the ovaries," they have ovaries "on the brain," instead of in the pelvis, and a very injurious mental effect is produced. Examination through the rectum, and a silent tongue, when nothing distinct and definite has been discovered, does them no harm. Women indulging in sexual intercourse too freely, I believe, suffer from these neuralgic pains. Women who, to prevent pregnancy, do not allow completion of the sexual act, also suffer in this way. Young married women, with some irritability of the external genitals, preventing completed coition, also suffer from neuralgia of the ovaries. Women suffering from painful erosion of the cervix, sensitive as a boil to the touch, also suffer from ovarian pains. These causes of

ovarian pains and tenderness must not be overlooked. Leopold believes, and it is undoubtedly true, that pains in the pelvis are often caused by myomata so small as to be overlooked, and so situated as to give rise to no excessive hemorrhage; but I do not believe that these pains, as a rule, are very severe. The castration of men for the relief of neuralgic pain, and for other nervous diseases, has not been successful; such cases are better dealt with by the neurologist than by the surgeon. It is better for surgery that we should never do a surgical operation than that we should perform operations without benefitting our patients. While lunching some time ago with a celebrated surgeon, I met a young lady whose mother had been operated on by another surgeon. Her ovaries and tubes had been removed. My friend said the operation had been done contrary to his advice, and that now, when the patient was worse than she had been before operation, she had again returned to him for advice. It is only a few months since I read in a medical journal an account—to me a melancholy one—of the castration of twenty women in one year, in a small place, by one surgeon. Surely this kind of thing will soon cease. Many of us have erred in this particular; we have all made mistakes. Let me ask you now, in conclusion, to leave the ovaries and tubes where the Creator put them in all cases in which no enlargement or matting together of the pelvic organs is to be felt per vaginam under an anæsthetic after repeated careful examinations; to leave so-called prolapsed ovaries alone if they are not enlarged; let me, above all, urge you to send your cases to some one in the habit of doing abdominal surgery, if they have any enlargement, ovarian or tubal, or if they have this peculiar matting of the pelvic organs, the old time "cellulitis"; let me urge you to send, also, any doubtful cases before you blister them and paint them, curette them and cauterize them, deluge them with hot water and go twice a week to insert a glycerine tampon, before the husband's pocket has been emptied by continuous and unavailing treatment, so that he is forced to partake of charity when the final and only curative treatment—operation and removal of the diseased organs—is carried out. I could show you three histories to-day, and you would say after reading each of them: "Oh! pelvic hæmatocele." So I thought until I opened the abdomen of each case. One was pelvic hæmatocle, rupture of a hæmato-salpinx into a broad ligament; one was double pyo-salpinx, with rupture of a pus tube into a broad ligament, so that the communicating opening could be readily made out; one was double ovarian disease, with what I thought was rupture of one cyst into the broad ligament, either that or a broad ligament cyst intimately connected with the enlarged cystic ovary. These ruptures gave rise to the sudden symptoms. Surely such cases should open our eyes. To my mind "chronic pelvic cellulitis" means diseased ovaries or diseased tubes, with periodical attacks of peri-ovarian or peri-salpingeal inflammation. This is no vain imagining, but is the outcome of a practical acquaintance with the inside of the female pelvis

Healthy tube enlarged.

A. Villi not agglutinated but perfectly normal.
B. Circular muscular fibres.
C. Longitudinal musc. fibres.

Diseased tube enlarged.

A. Villi agglutinated.
B and *C.* Same as before.

PLATE No. VIII.

Transverse section of tube, from case given in Plate V, and beside it that of a healthy tube. Life size.

Healthy tube, actual size. *Diseased tube, actual size.*

Here we have transverse sections of the tubes from such cases, and beside them, for the purpose of comparison, sections of a normal tube. No one can look at such tubes side by side and fail to see the marked difference between the condition of health and disease. If it is difficult to cure a chronic catarrh of the nasal passages, and to prevent its recurrence, with the parts before us, easy of access, allowing the ready use of all

kinds of applications, including electricity, how much more difficult must it be, if not impossible, to cure a similar condition in the Fallopian tubes, organs placed beyond the reach of topical applications, opening into a large and readily infected serous cavity, fastened to organs undergoing great changes every month, and irritated by the discharge of marital duties? Such tubes as I show here must come out, if the patients are to be permanently cured. Because occasionally a mistake in diagnosis is made, or because occasionally a case may go on in apparent health, with a sealed pus tube that permits no escape of its contents, are we, therefore, to let the great majority of the cases drift into chronic invalidism? They do not die early in a great many cases, but they are not cured, though they try all kinds of medicines and all kinds of practitioners. Operation, urged so forcibly on the profession for years by Tait, a profession still imbued with the old vague ideas of a peculiar inflammation of pelvic cellular tissue, and with equally vague ideas of its origin and the cause of its recurrence at irregular and frequently long intervals, will cure these cases.

I show also a plate pointing out the microscopical appearances of the interior of the diseased and healthy tube. The plates were drawn from preparations made by myself. Two different points in the interior of the diseased tube have been chosen, one to show the partial loss of epithelium and the presence of only ill-developed epithelium without cilia, and the other to show the total loss of epithelium on the free surface of the villi, *i.e.*, toward the lumen of the tube and the agglutination of the villi, leaving small spaces lined with epithelium. Then we have a careful drawing of a beautiful preparation showing the normal condition.

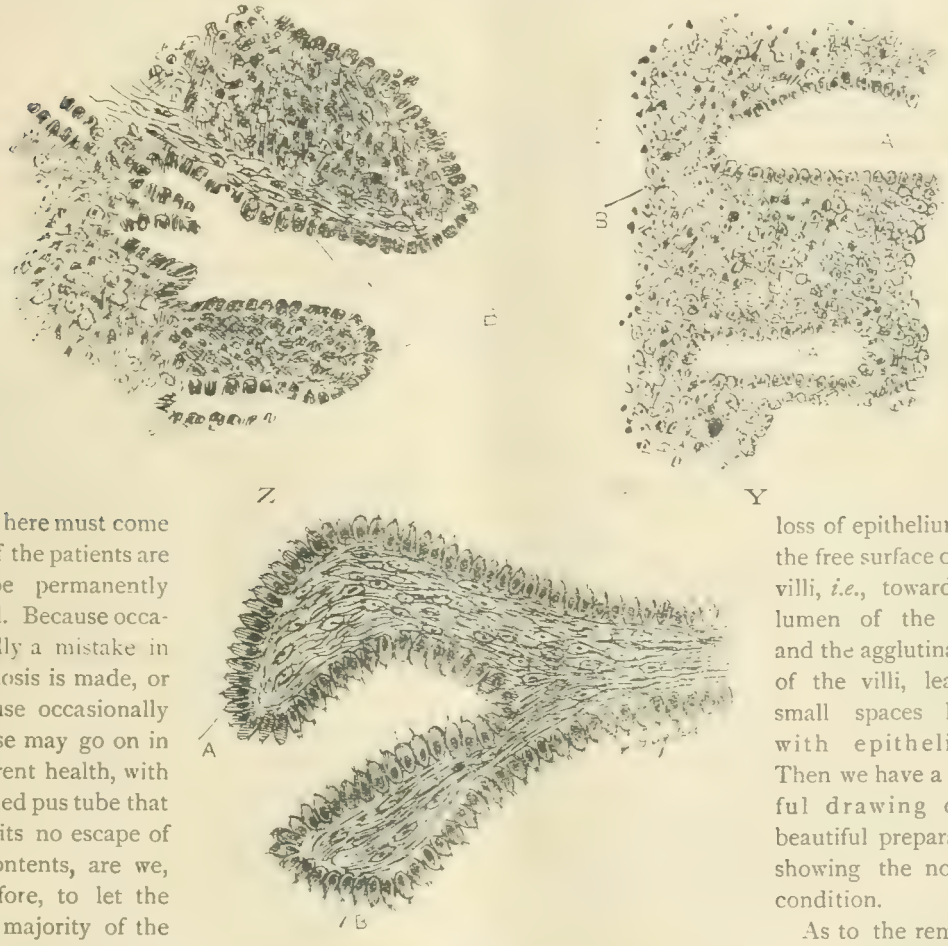

PLATE No. IX.

Z. *A.* Epithelium in part destroyed; cilia gone. *B.* Inflammatory new formation cells. *Y.* *A.* Epithelium left in spaces by agglutination of villi. *B.* Free surface covered with inflammatory cells. *L.* Villi from healthy tube.

As to the removal of ovaries and tubes to relieve hemorrhage produced by the presence of myoma, I will say nothing now. Whether the operation will fulfil all that is expected of it by its supporters, will be determined in time. For the present I intend to continue to perform the operation.

As to the use of electricity in the cases in which I am convinced nothing but the knife will suffice, I may say I regard it as a veritable "will-o'-the-wisp," and an expensive one to the patient's husband. This opinion is gaining

ground daily. If electricity could stop menstruation in these cases of recurrent pelvic inflammation, it could possibly cure them. I have used it in cases of salpingitis, with pelvic inflammation, to satisfy the patient's friends that nothing but the knife would eventually avail. I will not do so any more. If they require such treatment for a disease upon which its vaunted potency is, in my experience, lost, they must go elsewhere.

I wish here incidentally to state, and I hope you will pardon the digression, that I have been interested to notice the peculiar relationship existing between tubercle and chronic inflammatory pelvic disorders. In at least every other case in my case book I find that the patient has lost either father or mother, or both, from phthisis, or has a strong tendency to tubercle from her collateral family history. When the organs become more than usually active, owing to marriage, they seem unable to undergo the great changes required without becoming diseased. I hope at some future time to collate my cases and bring this subject before you. Such a relationship has been n ticed by many others.

Some of you may think I have been too aggressive and conservative; my remarks have been made in a spirit of friendly criticism, and in the hope that they may be, in a humble way, the means of assisting in the cure of suffering, by operation, that is too often but alleviated, and of impressing, to some slight degree, upon you the necessity of searching for other means than the knife for curing diseases as yet left uncured by either the gynæcologist or the neurologist.

Thanking you for your kind attention, I will now close.

Selections.

COMPLICATIONS OF DIABETES.

I will speak to-day of the complications of diabetes and the various forms which this malady may assume.

Most authors have attributed these complications to a formation of acetone in the blood, and have described them under the name of acetonæmia The question is not settled. I think the word acetonæmia can be retained, without inconvenience, for the condition which we understand by it.

By it we ought to designate the collection of phenomena, occurring in the course of diabetes, and acknowledged to be caused by the retention in the economy of poisonous products, whatever they may be.

Just so, uræmia means a poisoning, not by urea, but by all the excrementitous material which the kidneys no longer eliminate.

These facts being granted, we must admit five principal forms of acetonæmia, which may remain separate, but which ordinarily co-exist, and give rise to a picture of symptoms peculiarly complex. I will designate them as follows, according to the functional disorder predominating: Muscular form, gastro-enteric form, dyspnœic form, cardiac form, cerebral or comatose form.

Muscular Form.—This form is characterized by extreme languor, painful points in the muscular masses, and a sensation of suffering occasioned by motion. These patients have a presentiment of approaching death. The face is discolored, although there is no notable change in the expression of the physiognomy. There is no febrile reaction, but rather a lowering of the temperature by half a degree, coincident in general with a diminution of the quantity of urine.

These symptoms persist for a certain time, then disappear; sometimes, if they are not controlled, they suddenly increase, or become complicated with symptoms of one or the other of the forms which follow; in this case they may be regarded as a prodrome of these latter.

Gastro-enteric Form.—Preceded in certain cases by extreme languor and general weariness; this form is characterized by a sensation of malaise, and by nausea, followed by abundant vomiting.

The vomit consists of mucus and bile. The vomiting returns at intervals during many days. An obstinate constipation occurs in some cases. But at other times, there exists a liquid diarrhœa, extremely abundant, and preceded or accompanied by violent colic and a notable diminution in the secretion of urine. This flux appears to me to be the result of natural causes, and to be destined to eliminate the organic

waste products which intoxicate the patient. That is why some of our patients in whom the diarrhœa has ceased for a little while, are attacked by headache, intense dyspnœa, and a coma which carries them off rapidly. The diarrhœas of this nature are, therefore, beneficial, and elimination should be encouraged by the administration of purgatives and diuretics.

Dyspnœic Form.—This is especially characterized by a painful sensation of oppression with difficulty of respiratory movements. It may come on suddenly, or it may follow some of the other symptoms which we have described. Respiration is accelerated, but regular, differing in this respect from that of uræmia. There is a shortness of breath comparable to that which a fast walk or long run produces. The face is not purple, but pale and livid; the patient is in bed in a half-upright posture, or he has complete orthopnœa; he is worn out by a dry, but not paroxysmal cough; agitated and anxious, he experiences a feeling of anguish which gives the idea of approaching death; his breath has an odor which may be compared to that of alcohol, ether, or certain kinds of fruits, as the apple or melon for example.

This state cannot be explained by any pulmonary or cardiac disorder, and if sometimes auscultation shows the presence of a slight murmur over the cardiac orifices, it has no significance; there is here a dyspnœa of toxic origin, either simply nervous, or perhaps connected with anoxhæmia.

Differing from Cheyne-Stokes respiration, which has no intermittence, diabetic dyspnœa is, nevertheless, most painful, for the respiratory act is very frequent and extremely labored. This dyspnœa has a variable duration; it may persist many days, then disappear, unless there occur in addition phenomena of cardiac paralysis or diabetic coma.

Cardiac Form.—The cardiac disorders manifest themselves, so to speak, constantly, by rapidity and smallness of the pulse, which increases rapidly to 120, 140, or even more beats a minute. It is small, regular, and more or less feeble. The extremities are cold, the weakness is excessive, the fatigue extreme, the temperature lowered. Some patients who apparently do well during the night, excepting slight shortness of breath, are suddenly taken with general uneasiness, with inability to maintain the upright posture, or to execute the least movement without getting pale and falling down exhausted. I have recently observed this grave form in a patient of mine. An old lady, rheumatic and diabetic, was, after some exertion and motion, affected with excessive weariness; she grew lean, nevertheless she continued her jaunts, and seemed always to enjoy good health, when one morning in getting out of bed, she fell down unconsciously.

"I am going to die," she exclaimed. She was put to bed and made to inhale ether. She finally recovered, but said she was very ill and that her life was in danger. She complained of a pain in the front part of the chest, and between the shoulders. On auscultation, I heard a slight murmur at the base of the heart. I asked myself whether this patient was not suffering from angina pectoris, and whether the accidents observed were not dependent on a lesion of the aorta or coronaries. Next day, wishing again to rise, the patient again broke down. Struck by the peculiarity of these accidents, I now thought of diabetes. Examining the urine, I found it to be of a high specific gravity, and to contain fifty grammes of sugar to the litre. I now made the diagnosis of heart phenomena dependent on diabetic intoxication.

I prescribed a purgative enema and a draught of ether and bromide of soda. During this time the pallor and oppression increased, the anguish grew more excessive, the heart beats reached 140 per minute, and five days later death took place as the result of a slight effort, consciousness being preserved to the last.

It is no doubt difficult to explain this kind of death. Still we know it was not from syncope. For in syncope death is instantaneous, and results from spasm of the heart; on *post mortem* the heart is found either empty or containing a small quantity of fluid blood. In the cardiac form of diabetes, the pulse accelerates itself at first, then the heart grows feeble and ceases to beat, as it gradually loses its power; the cavities are filled with blood clots. It remains to be determined what is the cause of this paralysis. Is it the result of an abolition of the red blood-corpuscles, of an anoxhæmia, as the discoloration of the skin would indicate, or does it result from failure of action of pneumogastrics, which

no longer exercise their moderating influence on the sympathetics?

Cerebral Form.—This form, which is by far the best known, comes on suddenly, or follows one or the other of those forms which we have studied. In most cases it is announced by prodromic phenomena, such as lassitude and extreme weariness.

The symptoms which characterize it are variable. Sometimes there is a headache of medium intensity with vertigo at the moment of waking or during the day; sometimes there is a coma, more or less profound. There is a delirium which urges the patient to get out of bed and to run away.

These diverse varieties of the cerebral form are more rare than diabetic coma; they may exist alone, then disappear; but often they are accompanied by somnolence and coma.

The coma, which is the most common expression of cerebral acetonæmia, has under some circumstances a beginning no less sudden. Frequently, after a sudden effort, the patient falls, stricken by a kind of apoplectic stroke which reminds one of that produced by cerebral hæmorrhage. The collapse is complete, the muscles relaxed, the integument insensible, the eyelids closed, the pupils dilated, the extremities cold, the face pale, the mouth sometimes half open. The breath is sour and very penetrating. Its odor is midway between that of alcohol and vinegar. Deglutition is difficult or impossible; respiration short and abrupt, sometimes slowed. The temperature is normal or lowered. The dejections are involuntary, and the torpor profound. This state may last from a few hours to many days, and always terminates fatally. Nevertheless, I think appropriate medication should be able to render itself master of it, as is to-day the case in uræmic coma.

Such are the grave symptoms of diabetes. In order to draw attention to them in a more special manner, it appeared to me proper to consider them separately, in spite of the fusion which they present in certain cases.

The symptoms, when of a certain intensity, with difficulty escape notice; but, coma excepted, they frequently do not sufficiently arouse the attention of the physician. Exhaustion, accompanied by acceleration of the pulse, great dyspnœa, excessive fatigue and a presentiment of death, are easily recognized. It is otherwise with the dyspnœa which it is possible to confound with uræmic dyspnœa (especially when albuminuria co-exists) in spite of the differential characteristics of which we have spoken.

As to delirium and the coma, they are so similar in uræmia and acetonæmia that without the odor of the breath and the analysis of the urine it would be difficult to distinguish them. What renders error more easy, is that frequently the phenomena of the acetonæmia may be explained by an important disease of some organ. Thus the exhaustion following movements which render the upright posture impossible may be attributed to an affection of the heart, to angina pectoris, etc. The presence of pre-sternal pains, and of oppression and of cardiac murmur render error more easy. A cardiac murmur is indeed the rule in many diabetics who are at the same time subject to chronic rheumatism and arteriosclerosis.

In other cases, the stomach might be considered as the origin of the oppression, pallor and despondency, but the troubles arising from a disorder of this organ do not appear as suddenly as those of acetonæmia.

Acetonæmia, like uræmia, is almost always occasioned by a disorder of the organism. It manifests itself, sometimes as a result of a purely physiological cause, as a vivid emotion, fatigue, a chill, and, according to some authorities, a too highly animal regimen; sometimes it is occasioned by an intercurrent disease (no matter how mild), as for example, gastric disturbances, bronchitis, or pneumonia. As the danger in diabetics is from acetonæmic complications, we recommend a careful hygiene.

Since we are ignorant of the pathogenetic conditions of acetonæmia, no precise therapeutic indications can be drawn from them. Nevertheless, it is certain that the accidents which we have described under this heading are the result of auto-intoxication, which, as a rule, is accompanied by diminution of the quantity of urine. Hence the indication of favoring, like in uræmia, the elimination of poisonous substances both by the gastro-enteric and the renal channels.

To these general indications, others may be sometimes added. Thus, when there is general pallor, and oppression seemingly due to faulty absorption on the part of the red blood-corpus-

cles, inhalations of oxygen find a natural indication. When the pulse is very rapid, and the least movement induces faintness, and there are signs of cardiac paralysis, then the employment of caffeine and ether, as also the use of lotions and cutaneous frictions impose themselves. In such cases, the physician ought to appreciate the gravity of the situation, and should act with promptness and energy. The grave phenomena which are observed should be immediately combated.—*Dr. Lancereaux in le Bull. Med.*

THE *Annals of Surgery*, a journal devoted exclusively to surgery, is undoubtedly a publication of value. From the numerous important papers which have already appeared during 1890, we have made the following extracts :

On the Removal of Enormous Vesical Calculi by the Supra-pubic Route, with Report of a Successful Case. By J. William White, M.D. The author records a case of a patient, æt. 55, from whom he removed a calculus which weighed 9½ ounces, its greatest circumference was 8½ in., and its transverse circumference 7½ inches. The bladder was nearly filled with the enormous stone, it was covered, over at least three-fourths of its extent, with folds of mucous membrane, and was held tightly in place by strong bands of lymph. It was only with great difficulty, and by the exercise of considerable force, that the operator was able to extract the stone from its bed. Two large drainage tubes were inserted through the wound into the bladder. The bladder was washed out every three hours with a saturated solution of boric acid, with 1:5000 perchloride of mercury. The bichloride caused an erythema around the wound, and phenol sodique, 1 to 10 of water, was substituted. The patient sat up on the 25th day, and the wound was entirely closed at the end of 4½ weeks.

The author commented upon the incarceration of the stone by means of such firmly organized lymph, and by such a projection of the mucous membrane around about it ; the stone practically lay in a cavity of its own, communicating with the bladder by means of the aperture through which a portion of its convex surface protruded. The mode of formation of these cysts is variable. In the majority of patients of the age of this one, it has seemed probable that the condition was brought about primarily by enlargement of the prostate, causing vesical hypertrophy with distention, and with the protrusion of the mucous membrane between the fibres of the detrusor, which gives rise to the well-known sacculated bladder of old people. Gross mentions a case in a man, æt. 84, where such a sacculus held a gallon. These cysts have no muscular fibres and, of course, no power of completely evacuating their contents, although they may do so partially by aid of the abdominal muscles. A certain amount of "residual urine," therefore, always remains in them, throwing down a sediment, and setting up a catarrh, the mucus of which binds together the crystals and sedimentary deposit, forming the nucleus for the stone. In this instance, however, the symptoms date so far back into middle life (the man had suffered from vesical irritation for 26 years), that this explanation hardly seems entirely satisfactory, and it appears more probable that the cyst was formed by the gradual sinking of the stone, as it grew, into a pocket made by its own weight, the hypertrophied and thickened mucous membrane rising above its borders and becoming fastened to it by lymph bands.

When an encysted stone is partially within the bladder and partly encysted, the neck of the cyst being the obstacle to removal, if the stone be of moderate size, and if the condition be discovered during a perineal lithotomy, after the projecting part into the bladder has been removed, or before, in some cases, the operator endeavors with the finger nail, or a director, a searcher, a scoop, or other elevator, to dilate, or slightly tear the neck of the cyst and work out the calculus. In this manœvure, pressure upon the hypogastrium or through the rectum may be of great assistance. If moderate manipulation fail to dislodge the stone, a curved probe-pointed, long bistoury, may be used with great caution upon the finger as a guide, to cut moderately the constricted edge of the neck of the cyst in one or more places. Such use of the knife involves risk, and it rests with the operator to decide, according to the circumstances of each case, whether to assume the risk or to resort to supra-pubic section. In the case of a large pouch connected with the bladder, and containing a small stone, the neck of the pouch may be dilated with the finger or

small forceps, and the stone reached. When the stone is practically outside the bladder, or in a dilated ureter, some operators prefer to leave it untouched. Thomson acted in this way in the presence of a stone in the ureter. It is plainly the surgeon's duty to cut scantily in such cases.

As to the choice of operation, Dr. White adds, that there can scarcely be two opinions, supra-pubic cystotomy being so evidently the only available method. He states his opinion as to the duty of the surgeon who, having opened the perineum by either the median or lateral section, finds that he is dealing with an encysted calculus of large dimensions. Under these circumstances the abandonment of the perineal route being imperative, the high operation should be performed, either at once, if the patient is in good condition and well-fitted to bear shock, or, if that is thought inadvisable, as soon as the perineal wound is fairly well granulated, the patient then having the benefit of the drainage by that route without the danger of septic absorption.

On the Symptoms of Chronic Obstruction of the Common Bile Duct by Gall-stones. By William Osler, M.D.

Since the bile passages have been brought within the sphere of surgery, a renewed interest has been taken in all symptoms which give us more accurate knowledge of the character and situation of lesions in these parts; and in this paper Dr. Osler deals particularly with a form of fever met with chiefly in chronic obstruction of the common bile duct by gall-stones, as it possesses features of the greatest importance for diagnostic purposes. The fever is intermittent in character, and the cases present the following group of symptoms:

1st. Jaundice of varying intensity, deepening after each paroxysm, and which may persist for months and even years.

2nd. Ague-like paroxysms characterised by chill, fever, and sweating, after which the jaundice usually becomes more intense.

3rd. At the same time as the paroxysms, pains in the region of the liver, with gastric disturbance.

In the majority of cases this combination of symptoms is characteristic of the existence of gall-stones in the common duct. We meet with rigor-, fever, and sweats, in three conditions of the bile passages: as an acute and transitory process in ordinary hepatic colic, associated with the passage of a stone through the duct; in chronic obstruction of the duct, usually by stone, without lesion of the bile passages other than dilatation and catarrhal cholangitis; and in suppurative cholangitis produced by gall-stones or other causes. Dr. Osler proceeds to speak of intermittent hepatic fever with its associated symptoms as characteristic of chronic obstruction of the duct by gall-stones and without suppuration.

The clinical histories of eight cases are recorded, presenting the conditions referred to. Of these eight cases, six were women; two died from the effects of the long-continued jaundice; three recovered after the persistence of the condition for from eight months to three years, and one passed from observation.

In analyzing the symptoms associated with these paroxysms we have:—

First: *Jaundice.*—This was present in every instance, and may be said to have been constant, though varying very greatly in intensity. In every one of the cases the statement occurs that after the paroxysm, the jaundice invariably deepened. With this the amount of bile pigment increased in the urine, and the stools became more clay-colored. After persisting for a week or ten days, the tint would become lighter. The urine, too, would become lighter in color and the stools contain bile.

Second: *Fever.*—This in well-developed paroxysms begins with a sharp rigor. In one case in particular, a large, stout woman would, during the rigor, shake the entire room, and cause the small wooden house in which she lived to vibrate. It may be represented, however, only by a sensation of cold, a creeping chill, in contra-distinction to a shaking one. The fever rises suddenly, and may reach from 103° to 105°. At first dry and pungent, the skin gradually becomes moist, and usually within from two to five hours of the commencement of the rigor the patient is bathed in perspiration. The entire duration of the fever is from six to twelve hours; rarely does it persist for an entire day. Defervescence takes place rapidly when the sweating begins. Although the rule

is for the paroxysms to present the usual stages, as here described, there were in each of the cases lesser attacks, often of fever alone or of fever with sweating. Slight rises of temperature without chills also occurred. Sweating was occasionally seen without the fever. The paroxysms occur at irregular intervals, but they have recurred daily for a week or ten days. They may present a tertian or a quartan type, and in such cases the diagnosis of ordinary ague may be made. In one case the paroxysms recurred for weeks on Friday.

Third: *Pain* of some sort is, as a rule, present. It may, but certainly does not always, precede the rigor. In some cases it is not at all a striking feature, and the most intense paroxysms may be quite painless, or only accompanied by a sense of gastric distress. It may have all the symptoms of genuine hepatic colic, agonizing, griping pain in the liver region, with the associated symptoms, feeble pulse and clammy skin. In several of the cases the pain was not at all a distressing symptom.

Fourth: *Gastric disturbances.*—Vomiting often precedes or accompanies the attack, and frequently before its onset the patient complains of loss of appetite or nausea; the tongue becomes furred, and it seemed very often as if a gastric catarrh really initiated the paroxysm.

The condition of the patients in the intervals between the attacks is a point of considerable importance. They are often able to resume their work, or in the case of women, to do light household duties. There is not progressive deterioration of health and strength such as we meet with in malignant disease.

Diagnosis.—The significance of hepatic intermittent fever cannot be appreciated without taking into account the associated group of symptoms, and when these are present it points clearly to obstruction of the common duct by calculus. The condition of the bile passages in these cases is one of catarrhal, not suppurative, cholangitis.

Chronic obstruction of the bile duct, either by stenosis or by gall-stones, may persist for months without inducing this intermittent pyrexia as illustrated by two cases which Dr. Osler narrates.

It is, therefore, not the obstruction alone which induces the intermittent fever; there must be something superadded, probably the ferment-producing agents, the micro organisms which have been found in two cases.

From a practical stand point suppurative cholangitis is the only affection from which gall-stones with hepatic intermittent fever is to be differentiated. The *post-mortem* examination in two cases, and numerous observations which Dr. Osler has found in the literature, show conclusively that the intermittent pyrexia in these long-standing cases is not necessarily associated with suppuration in the ducts. But, unfortunately, suppurative cholangitis is most frequently caused by blocking of the common duct with a stone; and it is important to determine in a given case the onset of suppuration. In deciding this, stress may be laid on the following points:—1st, increased tenderness in the hepatic region with possible enlargement of the gall-bladder, as this is a more common event in suppurative cholangitis than in simple obstruction of the duct; 2nd, the more frequent return of the paroxysms, and in some instances the irregularly remittent character of the fever; 3rd, the jaundice is not so intense in suppurative cholangitis, and we do not see the remarkable deepening in color after the paroxysms; and 4th, the general condition of the patient in the interval is very different in the two conditions. When suppuration exists there are rarely the prolonged periods of apyrexia, the freedom from distress, and the general betterment which we see in cases of simple gall-stone obstruction.

There may be, however, the greatest difficulty in deciding, and, after all, in the question of treatment it does not make much difference.

In the chronic obstruction which results from the compression of a cancerous mass either in the head of the pancreas, or secondary, in the lymph glands, there are occasional rigors, due to catarrhal or suppurative cholangitis, but the sequence of the symptoms would, I think, enable one to decide between this condition and gall-stones.

A confusion of these cases with malaria is not likely to occur; the negative condition of the blood is very suggestive; the absence of Laveran's organisms led to a revision of the diagnosis in two cases.

Pathology.—Two views have been advanced. Charcot believes that hepatic intermittent fever

is due to the production of a ferment in the bile passages, the absorption of which into the blood excites the febrile paroxysms. A certain measure of support is lent to this view by the discovery in the ducts of a case of cholangitis, by Netter and Martha, of a bacillus similar to one of the intestinal organisms.

On the other hand Murchison inclines to the belief that the febrile paroxysms are due to the simple irritation of the stone, not to a septicæmia.

Prognosis.—Recovery is the exception; the majority of cases result in death from exhaustion and cholæmia.

Treatment.—The remarkable success which has already been obtained by surgeons indicates clearly the line of treatment which should be followed, and although the results of opening the common duct have not been so favorable as in cholecystotomy, yet they are sufficiently hopeful to warrant the attempt, in every case, either to push the stone into the duodenum, to crush, or to extract it.

Of medicinal agents, Dr. Osler has not found any of the slightest value; quinine is quite ineffectual either to prevent or to control the paroxysms.

CONCLUSIONS.

1. Chronic obstruction of the common bile duct is often accompanied by an intermittent pyrexia, associated with a symptom-group of the greatest diagnostic importance.

2. This pyrexia is not usually the result of suppuration, as has been supposed, but occurs with a catarrhal cholangitis.

3. That it arises from the absorption of a ferment, produced in the ducts, is rendered highly probable by the discovery of micro-organisms, both in the catarrhal and in the suppurative cholangitis.

4. While recovery may follow, even after months or even years, a fatal event is only too common.

5. A recognition of the importance of this intermittent pyrexia and its associated symptom-group, as diagnostic of obstruction of the common duct by gall-stones, should, in the present condition of hepatic surgery, lead to more frequent operative interference in these cases.

A Method of Operating for Complete Prolapse of the Rectum. By John B. Roberts, M.D.

The patient was a young woman, suffering from prolapse of the rectum, of several years duration. The anal aperture was so dilated that the ends of five fingers of the hand could be readily inserted into the rectum. When the bowel was prolapsed it protruded from the anus as a sausage-shaped mass, about four inches in length.

The steps of the operation were as follows: Making a small incision in the middle line near the point of the coccyx, the finger was introduced and the cellular connections behind the rectum were broken up, as is done in preparing to excise its lower portion for carcinoma. The sphincter muscle was then divided in two places by incisions, situated each about a-half inch away from the posterior median line. By carrying these incisions obliquely backward through the skin until they met at the original incision, near the tip of the coccyx, including between them a triangular portion of tissue, which had, as its base, about one inch of the anal sphincter, with scissors was then cut from the posterior wall of the rectum a long, triangular piece, consisting of the entire thickness of the wall. The apex of this V-shaped section was situated about three inches up the gut, while its base corresponded with the space between the incisions, by which one inch of the sphincter muscle was removed. After the hæmorrhage had been controlled by catgut ligatures, chromatized catgut sutures were used to bring the divided wall of the incised rectum together. The first suture was introduced at the apex of the wound, that is, three inches above the anus, and was tied with the knot *within* the bowel. Successive sutures were introduced with intervals of about one-third of an inch between them, until the lower margin of the rectal wound was reached. The last intra-rectal suture was placed just within the margin of the anus. They were all tied upon the mucous surface of the bowel, so that the knots were within the lumen of the intestine. In this manner the lower portion of the rectum was greatly reduced in diameter. The divided ends of the anal sphincter muscle were then brought together by two catgut sutures and one wire shotted suture. The anal aperture was thus reduced so that it was barely possible

to introduce the tip of one finger, whereas originally five fingers could readily be thrust into it. A drainage tube of rubber was then introduced into the cavity between the rectum and the sacrum, and the wound leading backward from the anus to the coccyx was closed by numerous shotted wire sutures, carried deeply by means of a strong and curved cervix uteri needle.

THE
Canadian Practitioner
A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, NOVEMBER 17, 1890.

THE MEDICAL HEALTH OFFICER FOR TORONTO.

The interest manifested by the citizens of Toronto in the appointment of a medical health officer is, in some respects, very satisfactory. It is unfortunate, however, that many of the discussions and comments on the various phases of the question have been very acrimonious. Although we hear of many candidates, the contest appears to lie at present between two whose names have been brought forward by their friends during the last few weeks. There was a strong feeling that the medical profession of the city should have something to say about the choice. The Council have shown their willingness to act in accordance with such wishes, and have appointed a committee of physicians to consider the capabilities of the various candidates.

As far as we understand the matter, it was expected that this committee would carefully conduct a competitive examination, and report the result of such examination to the Council. There is a fear in the minds of some that such examination will degenerate into a mere farce, and bring a certain amount of ridicule upon the whole profession. The criticisms respecting the fitness of the board appointed for such work by the daily press of the city have been harsh in the extreme. We may say with reference to this committee that it is scarcely one which can be considered representative from a sanitarian point of view; but, after all, it is one which, in spite of its weak spots, is likely to command considerable respect. There are many who think that a certain amount of variety in such a committee is a very good thing, in consideration of the fact that a certain proportion of sanitarians invariably become cranks. We have enough confidence in the ability and judgment of the members of the committee to believe that they will be able to reach certain conclusions, which will materially assist the Council in filling the position. To hold simply a competitive examination, and to report the results in marks or percentages, would be rather a school boy way of doing business, and, from a professional point of view, an exceedingly undignified method. From what we can learn of the feeling of the profession in Toronto, we think there is a general desire that this committee shall view the question in all its aspects. In the first place, is the salary offered ($2500) sufficient? We are told that the health officer will be required to give all his time to the city's work. In looking for official officers from other professions, such as law and engineering, sums of four or five thousand dollars per annum are offered. Why such a difference? Is the health of the citizens only half as important as the construction of by-laws or roadways, or can the men best qualified for the position be obtained from the medical profession at half price?

Will the new health officer be endowed with authority, or will he be merely an acting foreman and statistical book-keeper for some all-wise aldermanic committee? Should the new health officer be purely a laboratory bacteriologist and analyst, or should he combine the practical with the scientific, and possess a spinal column as stiff as that of Engineer Jennings?

What the committee may accomplish, we know not. It ought to be in a position to bring in a report which will materially aid the Council. We believe its members, individually and collectively, are working conscientiously in that direction. Under the circumstances, we believe they are fairly entitled to the sympathy and assistance of the profession as a whole. Any suggestions made in a kindly spirit are likely to receive respectful and careful consideration. Adverse criticisms and cynical sneers cannot possibly do any good.

NOTES.

DIRECTORY FOR NURSES.—The Directory for Nurses has its office in the rooms of the Ontario Medical Library Association; telephone 1718. It is under the general control of the Board of Trustees of the Library Association, and more particularly under the direction of Dr. W. H. Pepler. A small fee is charged for information regarding the qualifications, engagements, and addresses of the nurses asked for. The list of nurses is fairly large, and is carefully classified into male and female, and medical, surgical, and obstetrical. Great care is exercised in obtaining the correct addresses, and in keeping a correct list of the engagements of each nurse, so that no difficulty may arise in not finding a nurse when sent for, nor in finding her at another engagement. The Directory subserves a very useful purpose, but, to attain its maximum of usefulness, requires the cordial support of the profession, who might easily refer all applications for nurses to the Directory, with the full assurance that satisfactory attention will be given to the applications, and that the nurses will be of the best in the city.

CHLORAL FOR RIGID CERVIX.—It is about sixteen years since Dr. W. S. Playfair first recommended chloral for rigidity of the cervix in labor. At the recent meeting of the British Medical Association, Dr. Playfair referred to his experience of such treatment, which had been uniformly satisfactory. He said: "Under the use of this agent, the pains become longer, steadier, and more efficient, and the patient falls into a somnolent condition, dozing quietly between the pains, which are not lessened or annulled, as is so often the case when chloroform is used. More important than all, the wild stage of excitement which is so frequent in cases of rigid cervix is calmed, to the relief, not only of the patient, but of the practitioner. It is not necessary to administer large doses; fifteen grains, repeated in twenty minutes, by either the mouth or the rectum, produce an effect that usually lasts for several hours. Possibly a third dose may be required, but never more. Another good effect of this drug is that when the exulsive stage is reached, the patient being already in a state of partial anæsthesia, much smaller quantities of an anæsthetic are required than would otherwise be the case." The writer has used this drug, as recommended by Dr. Playfair, for the last fifteen years, with the most satisfactory results.

Meeting of Medical Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated meeting, Oct. 17, 1890. V. P. Gibney, M.D., Chairman.

NON-UNION OF FRACTURED RADIUS.

Dr. C. A. Powers exhibited a patient in whom this condition had existed for many years, and also showed an extension apparatus which had given relief. The first fracture occurred twenty-nine years ago, at the junction of the middle and lower thirds. A refracture took place eighteen years later, and united with deformity and disability. The radial nerve had become involved in the callus, and this gave rise to such intense pain that, five years later, she underwent an operation for its relief, in which the bone was again fractured. All attempts to cause this fracture to unite failed. When she came under the care of the speaker, in May of the present year, it was found that the carpus had slipped upwards, with the lower fragment of the radius, and had caused the ulna to project very forcibly against the soft parts, giving rise to much pain in the region supplied by the ulnar nerve. As further operative measures were not deemed advisable, a simple extension apparatus was applied and had answered admirably.

Dr. A. M. Phelps said that he thought it had been wisely decided not to subject the patient to further operation, as fractures of the radius, and of the lower third of the tibia, were peculiarly prone to non-union. Out of about 300 osteotomies, he had had only one case of non-union, and that was after an operation for the correction of an anterior tibial curve. Operations by himself and others had failed to bring about union. Thomas, of Liverpool, claimed that such fractures could be made to unite by pounding the parts with a mallet, but, in his experience, this method had not proved successful, and he thought that where there was muscle

between the ends of the bone, and the peculiar ivory-like condition of the ends of the bone, which was not uncommonly present, none of the methods heretofore proposed were likely to prove successful. He had very recently proposed and performed a new operation, which he thought might prove successful. It consisted in cutting down upon the ununited fracture, freshening the ends of the bone, and grafting in between them a part of the forearm of a dog—both patient and dog being secured in plaster of Paris. When the graft had united firmly, the dog's leg would be amputated, and the skin flaps of the dog united to those of the patient.

HIP JOINT DISEASE, AFTER TYPHOID FEVER.

Dr. J. McG. Woodbury presented a girl of eleven years, who, six months after a severe attack of typhoid fever, was found to have some limitation of motion, and pain at the right hip, with distension of the capsule. Flexion caused lordosis, and some pain. She was treated by counter-irritation over the joint, and a plaster of Paris spica bandage, and was allowed to walk around upon a high patten, with crutches. Now, after a period of eight months, there was no pain.

A CASE OF OSTEO-MALACIA.

Dr. Woodbury also presented a case of this nature. The patient had lived in Switzerland until twenty-six years of age, and had suffered considerably from exposure during the late war. On October 26, 1886, when forty-three years of age, he sustained a fracture of the surgical neck of the left humerus, and between that date and May 26, 1890, he received five other fractures, viz, two of the left humerus, two of the right humerus, and one of the left clavicle. Most of these fractures were caused by very slight falls. During the last three months, but more particularly since the first of last August, a tumor has been rapidly growing between the sites of the two fractures of the shaft of the right humerus. Two small tumors may be observed upon the clavicle, one at the point of the fracture, and the other to the inside of it. A specimen, removed from the large tumor with a harpoon, was sent to Dr. J. S. Ely for microscopical examination, and he reported that it contained "polyhedral cells, and occasional large spindle and giant cells." He adds, that this "speaks very strongly for sarcoma." A loud murmur, similar to that heard in aortic aneurism, is audible over the large tumor. Dr. Woodbury said that as in cases of tumor of the middle of the spinal cord, osteo-malacia, due to trophic disturbances, is one of the early symptoms, concurrent with disturbances of sensation; he had referred the case to Dr. M. A. Starr, with the hope of learning more about the etiology of this interesting condition. Dr. Starr examined the patient on two or three occasions—the last time only a few days ago—and had reported that there was no central lesion of the cord. The patient had had no pain with the fractures, or upon resetting these bones, and this, together with the fact that there had been no fractures of the lower extremity, seemed to favor the view that the condition was due to a syringo-myelia or tumors of the cord.

Dr. Powers said that Dr. Woodbury's case of multiple fracture with tumors, was very similar to a case of sarcomata which he had recently presented to the surgical section.

Dr. V. P. Gibney thought the pulsation in the tumor might be due to the condition of the tumor itself—in other words, it might be a pulsating sarcoma.

ANKLE JOINT DISEASE.

Dr. A. B. Judson presented a case of this disease, which he said was interesting because the child had suffered from this condition almost all her life. The disease began at the age of one year, and she is now about seven years old. Notwithstanding that she had been under mechanical treatment only two years, she had recovered, with but little disability and deformity. There was considerable lateral motion at the ankle joint; extension was almost normal; flexion was arrested at about ninety degrees. Scars on both sides of the ankle showed where abscesses had opened spontaneously. There was a difference of one inch between the two calves, and the shortening amounted to only a small fraction of an inch. This result had been obtained by the use of a simple brace, and without resorting to any operation.

Dr. John Ridlon presented an astragalus, which had been removed from a child by Dr. B. Farquhar Curtis, which had been brought to the speaker when only six weeks old. He had faithfully tried stretching, and the various retentive appliances, during a period of one and a half

years. Dr. G. S. Huntington had then operated by Dr. A. M. Phelps' open method, but without improving the condition. The specimen which he presented was interesting on account of two bony prominences which it showed, and which apparently had been the obstacle to flexion of the foot.

THE TREATMENT OF ANKLE JOINT AND TARSAL DISEASE.

The paper of the evening, with the above title, was read by Dr. T. Halsted Myers, who also presented a patient illustrative of this subject.

Dr. Myers said that tubercular inflammation might attack, first, the synovial membrane, later, the cartilage, and lastly, the bone; or the primary local focus might be in the bone.

While it was still confined to the synovial membrane, a number of surgeons recommended erasion. If it had attacked the bone, many more urged operative methods, irrespective of the general health of the patient. The author considered only the latter condition.

Simple incision was of no advantage, for we had no element of tension, as in acute processes, and we only opened new channels of infection, leaving the original disease unchanged.

The usual method of treatment, curetting the abscess walls and the sinuses, could not be expected to remove all disease, and would greatly increase the risk of absorption. The success which had been secured in some of these cases, seemed to be due to the power of the antiseptic agent to render inert the bacilli which remained.

The rational method was to remove all the disease at once; but apparently healthy bones contained tuberculous foci, and hence, it was a most difficult problem to know when to stop, and in fact, this could not be determined at the time of operation. If all the disease were successfully removed, the duration of treatment was less than under conservative methods. The ultimate results were, however, less satisfactory. He had seen a considerable number of misshapen and atrophied feet after operative treatment which were weak and painful, and required support to render them able to bear the weight of the body. He had not observed such results from conservative treatment. It was confessedly difficult to ascertain the ultimate results; and, although Dr. Shaffer had kindly placed the records of the New York Orthopædic Dispensary at his service, he had not been able in the short time at his disposal to do more, in most of the cases, than quote the histories.

The number of cases treated before July, 1888, was fifty-five, and of these, he knew personally that at least twenty-one were cured. Five were cases of synovitis, and sixteen of osteitis. The average duration of treatment in the latter was twenty-one and a half months, the longest case being under treatment fifty-five months. The results in all were extremely good; yet under careful private treatment still better results should be expected.

From our knowledge of the various ways in which the bacilli of tuberculosis may be spread in the body, it would seem that a primary tubercular process in a joint must be extremely rare. Drs. Prudden, Northrup, Biggs, and Thacher, to whom he had written for information on this subject, all considered that these affections were generally secondary, but agreed that primary joint lesions did occur. The practical importance of this was that the danger of general infection from a joint lesion, which was not interfered with surgically, was an entirely unknown, and probably extremely small, quantity.

Of the whole number treated (fifty-five), but three had died—one of diphtheria, one while tarsal disease was active, and the other, six months after a note of "nearly cured" had been recorded. In neither of the latter was the cause of death stated. However, in Dr. Scudder's report of eighteen cases of excision, six deaths occurred; three were due to the operation, or to its direct effects; another might have been; and the other two were from tuberculosis, but occurred one and two years after the operations.

The treatment of synovitis consisted in absolute protection of the joint from traumatism. In children, he considered a perineal crutch absolutely necessary while walking. Ordinary crutches were invariably laid aside at times, and the joint left unprotected. In addition to this crutch, the foot should be protected by a splint to avoid local injuries, and to maintain a good position. There being no involuntary muscular spasm while the disease was confined to the synovial membrane, traction was not necessary.

In cases of ostcitis, the same protection of the joint was imperative, and if there were pain and

spasm, indicating the necessity for traction, this could be applied at the ankle by means of a Dow's brace, or the apparatus of Dr. Sayre or Dr. Foster.

The application of adhesive plaster to a painful ankle required more care than a dispensary case was willing to give, especially when abscess was present. For this reason, he had found it most serviceable to employ a leg brace, or plaster splint, worn constantly, and a perineal crutch for walking, which could be laid aside at night; or the Dow's brace, as modified by Dr. Shaffer, might be used.

Abscesses should be left entirely alone, and the sinuses simply kept aseptic. After the joint was considered cured, it was well to wear an ankle brace for some months to prevent twists. The malpositions found in the acute stages were almost entirely due to muscular spasm, and did not require tenotomy or other operative treatment.

In the later stages, there might be bony changes, and these, if not painful or progressive, did not require treatment. However, if these conditions did exist, and yet there was no evidence of active disease, an attempt should be made to restore and preserve the normal relations of the parts.

The value of hygienic surroundings during the treatment of these cases could not be overestimated. His observations had been made on children only, and, for contrast, an extended series of cases in the adult would be very valuable. Without exception, every one of his cases of ankle-joint, or tarsal osteitis, in children, had done well under conservative treatment, and he had yet to see the case which he would condemn to erasion or excision.

Dr. N. M. Shaffer said that his own experience led him to think that one point in Dr. Myers' paper should be particularly emphasized, *i.e.*, the necessity of absolute protection of the articulation. He had accomplished this in practice, whenever possible, by the use of a modification of Dow's brace, and had found that adhesive plaster was rarely required, as a well-fitting shoe made efficient counter traction. He thought that the further removed the tuberculous joint was from the centre of the body the more benign was the disease, and the less the danger of general infection; and he was inclined to speak more strongly of the conservative treatment of ankle-joint disease than of any other articulation in the body.

Dr. Ridlon thought these cases did well with the Dow instrument; but with this, as with some others, we could not secure immobilization, but only protect the joint from the jar of walking. He had seen such excellent results in cases of suppurative ankle-joint disease without any treatment whatever, that he often doubted how much of a good result could be attributed to the treatment received.

Dr. H. W. Berg said that he had had such good results in the treatment of phthisis by the administration of the bichloride of mercury in doses of one-twenty-fourth of a grain, three times a day, that he was inclined to believe the old theory, that tuberculosis was really a change in the syphilitic virus, due to passing through several generations. He considered that splints like Dr. Judson's were imperfect, for, by taking their bearing from the outside of the foot, intra-articular pressure was increased. To diminish this pressure, the foot must be adducted and rotated inwards.

Dr. Phelps was of the opinion that the vast majority of these cases were cured by immobilization and relief of intra-articular pressure; but in suppurative cases, he believed that the soundest and most scientific surgery demanded operative measures. If we could protect the hip joint as well as the ankle joint, we ought to get equally good results in hip disease. He believed that these cases were inoculations of pathogenic germs on a diseased surface, and that they were purely local.

Dr. R. H. Sayre exhibited a splint which his father had devised for an adult with ankle-joint disease. He agreed with Dr. Ridlon, that it was difficult to apply traction at this joint, but he thought this splint solved the problem. His views regarding the prognosis and treatment of this disease were in accordance with those just expressed by Dr. Phelps.

Dr. Samuel Lloyd said that fifteen cases of adult ankle-joint disease had been treated in the New York Post-Graduate School by the so-called conservative method, but the relapses had been very frequent, and he thought this method was less likely to yield good results in adults than in children. In answer to questions from the

chairman, he said that several of the cases were due to injury, and a number of them were suppurative, while four were recorded as synovitis. Two of the cases had been discharged as cured before 1888, and were known to be well in 1889.

Dr. Judson protested against the statement that cases of disease in the ankle should do equally well without treatment, although neglected cases of ankle-joint disease would have nothing like so bad a deformity as those at the hip.

Dr. H. L. Taylor also spoke about the different mechanical conditions present at the various joints. The weight of the limb exerted great leverage upon the joint, especially in a spasmodic condition of the muscles. It is more marked at the hip than at the knee, and very much more noticeable than at the ankle. He referred to a case of ankle-joint disease occurring in a distinctly phthisical subject, where the sinuses were treated by injections of a saturated solution of iodoform in ether. The beneficial effect upon the healing process was almost magical.

Dr. Gibney said that, about ten years ago, the surgical section of the "Therapeutic Society" of this city spent about two years collecting data relative to the comparative results obtained by the operative and non-operative treatment of this condition; and the conclusion was, that the conservative method yielded the greatest number of useful ankles, even in cases where the foot was seamed with cicatrices. There were two or three operative cases having a high degree of equinus, and a stiffened and shortened joint, and one or two flail joints were also shown. In his experience, cases of adult ankle-joint disease relapsed again and again on the slightest provocation; later on, abscesses would appear; still later, pulmonary signs would develop, and then amputation would follow. As regards the mercurial treatment of tuberculous disease of the joint, he need only call attention to the fact that many years ago the routine treatment for these cases at the Hospital for Ruptured and Crippled was one-twenty-fourth of a grain of the bichloride of mercury in tincture of bark, three times a day; and the results attained by this treatment were certainly far from striking.

DR. GILPIN, of Brechin, had a severe attack of typhoid fever, but is slowly recovering.

Personal.

DR. E. MEEK (Tor., '89) has settled in Port Rowan.

DR. OSLER, of Baltimore, paid a flying visit to Toronto a few days ago.

DR. G. A. PETERS, of Toronto, expects to return to Canada about the first of December.

DR. JAMES M. MACCALLUM has been appointed Lecturer on Therapeutics in the Medical Faculty of the University of Toronto.

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THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:

A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management. - - THE J. E. BRYANT COMPANY Limited, 58 Bay Street.

TORONTO, DECEMBER 1, 1890.

Original Communications.

APPENDICITIS WITH SUPPURATIVE PYLEPHLEBITIS.*

BY H. T. MACHELL, M.D.,

On the 26th July last I was asked to see Mr. L. I found him sitting up reading, and obtained from him the following history.

He was thirty-three years of age. He had been perfectly well in every respect up to the evening of the 21st. He had dined between six and seven that day, and felt nauseated a short time after. About 8 or 9 p.m., he vomited freely, and almost immediately afterwards sharp diarrhœa took place. The vomiting and diarrhœa continued at intervals throughout the night. At 5 a.m. he had a rigor, followed by some very slight fever. During the day he was up, but did not go out of the house, as the nausea and diarrhœa continued, though much less than during the previous night. On the 23rd he was at business but was not himself. At 5 a.m., on the 24th, exactly two days from his former chill, he had a second one. During the 24th and 25th he was at business, but feeling quite miserable. On the 26th, at 5 a.m., he had a third chill.

Up to this time he had been living at the west point of the island, not far from the Lakeside Hospital, where he had been all summer, and where he had spent his summers for several years. Instead of going to business this day (the 26th July), he came to his father's house on Beverley street, where I saw him. The diarrhœa and vomiting of his first day's illness had now ceased, and all that remained of it was slight nausea, and sometimes vomiting after each chill. He expressed himself then as feeling very comfortable, without any pain or ache, pulse normal, and temperature $\frac{1}{5}$ or $\frac{2}{5}$ of a degree above normal. He was eating and sleeping well and professed himself as well as usual, except for a slight tired feeling which he could not shake off. He said my being sent for was entirely his mother's doing, as he did not feel ill enough to think of calling in a physician.

The case seemed one of intermittent fever. He was living at the island, with a lagoon at the back-door; he had had three chills, forty-eight hours apart, followed by some slight fever, and then the skin became moist. I naturally gave him quin. sulph., and the amount was gr. v. every four hours. In addition he was given calomel, gr. x.

On the 28th and 30th July and 1st August, at exactly the same hour, 5 a.m., he had a chill. These chills were not mild ones by any means. From the patient's description, they may safely be called rigors. Vomiting or nausea followed every chill. The chills lasted from fifteen to thirty minutes. The hot stage varied from ten or fifteen minutes to an hour or two, and as I always saw him about 9 to 9:30 a.m., the skin was nearly always moist and comfortable. The

* Read before the Detroit Medical Society.

quinine had been taken faithfully and without producing cinchonism.

On August 2nd, when I saw him, I was told that he had had three chills within the last twenty-four hours, each one of which was followed by vomiting, fever, and subsequently sweating. The same evening I saw him again, and found he had had two chills since my morning visit. His temperature then was 99, pulse 76, and respiration 22. He had now had five chills in thirty-six hours, notwithstanding he had taken quinine gr. v. every four hours for some days, and this had been increased to gr. v. every two hours for the last twelve hours.

August 3rd, 10 a.m. The behavior of the chills during the preceding twenty-four hours, considering the amount of quinine taken, compelled me to believe that I had something more than a case of malarial fever to deal with; and as the patient and his friends were each day expecting a cessation of the paroxysms, from the free use of the drug, I was compelled to take them into my confidence, and say that I thought the trouble would more than likely end in typhoid fever, or what, for want of a better name, is often called typho-malarial fever. This morning his temperature was $98\frac{2}{5}$, and pulse 72, and though I had spoken of typhoid to the friends, I felt that such a temperature on the thirteenth day of the illness—even if pretty early in the day—was not consistent with the clinical history of that disease. At 3 p.m., Dr. McPhedran saw him with me. His temperature was 100 and pulse 76. The doctor thought that, though there was a strong malarial element connected with the case, it would eventually end in an irregular typhoid. He suggested dropping the free doses of quinine and giving small ones instead. Accordingly he was given gr. i. o.h. 4.

During the next four days his temperature ranged from $97\frac{2}{5}$ to $100\frac{4}{5}$, and his pulse from 80 to 92. By consulting the temperature chart it will be seen that on the 6th his temperature was 98° at 9 p.m., a very unusual temperature in the second week of typhoid. As an offset to the temperature and pulse, was the frequency and appearance of the stools. They have been moving from two to seven times per day, always offensive, and as his father described them, "just the color of mustard, and quite loose." Even on the days the evacuations were frequent he had no pain, and they did not appear to exhaust him. In fact, it required some argument to make him believe it was better to use the bed-pan than walk to the bath-room; no iliac tenderness. His chills have averaged two per day, and very nearly always about the same hours—5 to 6 a.m. and p.m. They are nearly always ushered in with nausea and the frequent eructation of gas. Occasionally vomiting takes place before the chill, usually, however, just as it is over. Fever and restlessness, lasting from half-an-hour to two hours, follow each chill, after which the perspiration commences, when he begins to feel comfortable. As soon as the perspiration becomes free, he expresses himself as well again. Within the last day or two his father and mother have noticed that during the fever-stage his skin is slightly yellowish, and that as soon as the perspiration begins the yellowish tinge fades perceptibly. The patient was very dark naturally, having jet-black hair and whiskers. In addition to this (his natural color), he was quite bronzed from daily exposure on the bay when first ill, and it was difficult to notice any change in his complexion. After his mother called my attention to the decidedly yellowish tinge of his face and neck, during the paroxysm of fever, there was no difficulty in seeing that his conjunctivæ, too, were slightly jaundiced. There was neither pain nor tenderness in the hepatic region, nor was the liver or gall-bladder appreciably increased in size. Since his illness began he felt well in himself, except at the time of the paroxysms. He has had neither ache nor pain in his head, back, abdomen, or anywhere else. He is bright and intelligent as usual, and reads almost constantly, when not occupied with his chills and fever. He takes from two to three quarts of milk a day and enjoys it. He has not lost flesh.

August 8th, 5 p.m. As the illness is evidently not one of malarial fever, and as I am not able to say that it is typhoid, the parents asked to have Dr. Temple see him with me, with a view to throwing some light on it. His temperature was then $102\frac{2}{5}$, and pulse 100, while in the morning at 10 the temperature was 99, and pulse 86, and he had had one chill since my morning visit. Dr. Temple said the case reminded him very much of some cases of so-called jungle-fever which he saw when in India,

and was inclined to regard it as typho-malarial in its nature. On the assumption that it was more malarial than typhoid in character, he advised quinine in large doses, gr. x. o.h. 3. This was accordingly given for three days, when, as the chills continued as frequently, and as the physiological effects of the quinine were not very well marked, I shortened the interval between the doses to two hours.

On the 12th, at my morning visit, I noticed a little increase in the liver dulness. At first I thought it was the gall-bladder, from its shape and situation. The greater part of the dulness seemed internal to the right nipple line, and to extend at least an inch below the costal margins. There was no tenderness over this dull surface, but it was decidedly tender in the middle line just below the sternum. His chills continue pretty regularly every morning and afternoon, and his *motions* have varied little or none since the first of the month. They are loose, watery, offensive, and light yellow in color, with a few small curds in nearly every one. At no time since he had been ill have they been white or clay-colored. He passes large quantities of gas, which, at times, is very offensive—the motions always so.

As his chills and fever have continued in spite of the large amount of quinine he has taken, and as his jaundice appears to have steadily increased, and as he is somewhat weaker and has failed perceptibly in flesh, Dr. Temple was asked to see him again.

At 5 p.m., the time of our visit, his temperature was $99\frac{3}{5}$; when I saw him at my morning visit it was 97. The case was gone over again, and the malarial and typhoid and typho-malarial theories were discussed one after the other, and abandoned as untenable. It was very difficult though to give up the malarial theory because of the recurrence of the chills and fever at such regular intervals. The paroxysms have changed in character within the last week. Now, the chills are usually much milder than in the early stage. There is neither so much shaking nor do they last so long. Occasionally a severe one will occur. The fever stage, though, is more prolonged than in the early days, and the patient is much more restless and longs for the perspiration to begin. Yet, if asked if in pain, he invariably gives a negative answer. It was felt by both of us that the condition of the liver accounted for part, at least, of his illness. The quinine was dropped entirely after having been given gr. x. every three hours for three days, and then gr. x. every two hours for one whole day. In its place was given a mixture, the principal ingredient of which was mag. sulph., ℥ss. o.h. 4, and Wyeth's calomel tablets of gr. $\frac{1}{10}$ each every hour. The advisability of giving arsenic instead of quinine was discussed, but it was thought suitable for milder and more chronic cases.

From this date, the 12th August to the 16th, when Dr. McPhedran saw him with me, his temperature ranged from $95\frac{1}{5}$ to $100\frac{1}{5}$. The pulse during this time was from 72 to 86, and the bowels moved on an average three times a day. There was no change in the character of the motions. On the 13th and 14th he missed his morning chill; on other days he had two as usual. The jaundice to-day is more marked than when Dr. Temple saw him, four days ago. There was none at all when Dr. McPhedran saw him, thirteen days ago. The liver has steadily increased in size during the last four days. To-day there is less gas than usual in the intestines, and its lower border can be made out very readily. In place of the small semi-circular mass which occupied the situation of the gall-bladder, we can now map out the liver, very much increased in size. The surface below the ribs, as well as the border, is quite smooth, and the dulness extends at least three inches below the lower margin of the ribs in the nipple line. The sulcus between the right and left lobes can readily be made out, and so can the left lobe. In the axillary line and posteriorly the dulness was not so well made out. Palpation and percussion gave rise to no distress or pain. It was impossible to sink the fingers in and feel the under surface, as the abdominal muscles were so tense. This rigidity of the abdominal muscles existed throughout his illness.

In the light of two articles which Dr. McPhedran had run across in his reading, we could not help classing this case as one of "intermittent fever of hepatic origin," or hepatic fever. The articles which seemed to throw more light on the case than anything obtainable are: "Intermittent Fever of Hepatic Origin with Special Reference to Gall-stones," by Dr. Osler, in the

Johns Hopkins Hospital Report, last January; and "Hepatic Fever," by Dr. Pepper, of Philadelphia, which appeared in *The Medical News*, last March. Dr. Osler's cases were all associated with gall-stones as a cause. There was no history of such a thing here. He had never had the semblance of anything like hepatic colic or acute pain in the region of his liver or stomach. One of Dr. Pepper's cases bears considerable resemblance to this case.

The semi-circular increase in the liver dulness has now become broadened out, and to-day there is a general painless enlargement which seems to be steadily increasing in all directions. His jaundice is now more marked during the fever which follows each chill. There is no mistaking this fact, for, with two chills a day, there is ample opportunity for observing it. What else than inflammation of the liver could cause these symptoms? No fluctuating point can be made out, yet we feel sure from the history of this case and Osler's and Pepper's cases, that there must be suppuration either in the liver or gall-bladder or both. Having arrived at this conclusion, and in view of the fact that he is steadily losing ground, an exploratory incision was discussed, and thought to offer the best chance of getting rid of the pus, if it should be found to be localized. If disseminated throughout the liver in minute foci, the wound could be closed up, and he would be very little the worse for the operation. His parents were told of our view of the case, and were quite willing to have anything done that would give him a chance of recovering. Before doing the operation it was arranged that Drs. Temple and Strange should meet Dr. McPhedran and myself, and decide finally as to whether an exploratory incision should be done or not. Dr. Temple was out of town, and Dr. McPhedran and Dr. Strange saw him, with me, on the morning of the 18th.

His temperature was $102\frac{1}{5}$, pulse 110, and respiration 24, and he had had three chills since my visit last night. He had slept badly, waking every hour, then taking his milk and dozing off again for a short time. After going into the history of his illness, and examining him carefully, Dr. Strange was inclined to think some obscure condition of the liver was the principal trouble, and that this had been caused by malaria in the first instance. He suggested a large fly-blister, 4 x 8, over the liver, and arsenic and hydrarg. perchlor. internally. He did not think an exploratory incision advisable—the indications were not sufficiently clear.

The friends were told Dr. Strange's opinion of the case, and the idea of doing laparotomy was given up for the present, so decided were the doctor's views on this point.

From this time till the 21st, when Dr. Temple saw him again, he remained very much in the same condition; that is, his temperature ranged from 97 to $103\frac{1}{5}$, pulse from 88 to 132; his chills, fever, and perspiration returned about twice a day; his bowels—always loose—moved from one to three times a day, and, if anything, he took rather more nourishment. Egg-nog, boiled custard, and gruel were taken, in addition to the two or three quarts of milk. He looked better, and said he felt better. There was decidedly less jaundice than three days ago, and certainly less than when Dr. Temple saw him on the 12th. The nurse called my attention to one of the evacuations from the bowels. It was semi-solid, and appeared to be composed of at least half pure bile, the other portion a light-yellow in color. It was the first time anything of the kind had appeared, and both Dr. Temple and myself tried to make ourselves believe that this unloading of almost pure bile, coupled with his feeling decidedly better, was the beginning of a brighter and more hopeful outlook for him. While this improvement continued, Dr. Temple would not think of making an exploratory incision.

Aug. 27th. Liver dulness decidedly less; it measures at least two inches less in nipple line; no fluctuation or tenderness to be made out; the bowels have averaged four evacuations per day, and in every motion large quantities of apparently pure bile are to be seen; less bile in his urine; less jaundice; chills and fever about twice a day, probably not as severe as a week ago. There is this peculiarity in regard to the chills within the last day or two. Shortly after each chill sets in the patient becomes drowsy, goes to sleep, and sleeps or dozes till he begins to be feverish. If then questioned about his chill, he cannot remember it. On one or two occasions the nurse tried to rouse him, but could not do so while the chill continued. As soon as the fever begins he rouses up and gets

restless. The sweats at times are drenching. On the evening of the 21st, free perspiration lasted five hours, compelling the nurse to change night-shirt and the bed clothes several times.

The improvement which was apparent at the time Dr. Temple saw him last, on the 21st, has not continued. On the contrary he seems worse. His temperature is higher and his pulse is weaker and more frequent. He has also lost flesh perceptibly within the past week.

Dr. Osler saw the patient this morning, and was quite positive that there was pus in his liver—whether single or multiple abscesses it would not be possible to say—and advised aspirating.

Aug. 28th, 9.30 a.m. Present, Dr. Osler, Dr. McPhedran, Dr. Temple, and Dr. Sutton, of Pittsburg, who had just been seeing a patient with Dr. Temple.

After chloroform had been given, I introduced a large sized aspirating-needle just below the costal cartilages and a little within the right nipple line—the point designated by Dr. Osler—and directed it backwards and upwards at least three inches. Only a few drops of blood came away. The next point Dr. Osler suggested was in the axillary line, between the ninth and tenth ribs. I put the needle in nearly the full length, and on turning the tap, blood flowed freely and in a large stream—in fact, so large that I felt quite hot and uncomfortable till Dr. Osler assured us all that the hemorrhage did not signify—it would stop of itself almost as soon as the needle was withdrawn. About 6 oz. came away without any sign of pus.

I had gone prepared to do a laparotomy if thought advisable after the aspirating. As no pus was found with the needle, it was thought the patient ought not to be allowed to die—as die he must if he should continue to fail at the rate he had done the last week—without opening the abdomen, inspecting, palpating, and possibly draining the liver or gall-bladder. All were agreed on this point, but as he had already been under chloroform for thirty-five minutes, and his pulse was not very good, the majority thought the laparotomy had better be deferred till next day.

Aug. 26th, 2.30 p.m. Present with me, Dr. Osler, Dr. Temple, and Dr. McPhedran. Chloroform having been given, at a point midway between the linea alba and the nipple line just below the costal cartilages, I made an incision about four inches long. The muscles and fat were quickly divided and the peritoneum opened, when the liver came into view. It extended as far down as the lower angle of the wound. On its surface was seen a small thin film of clot, while to the outer side of the incision, and along nearly its whole length, was a firm coagulum nearly as large and thick as a small hand. It had evidently come from the second puncture the day before. After removing this clot the liver came well into view, and though large, appeared normal in color. No pus sacs visible, no bulging at any point. The liver felt harder and more brawny than normal. On the anterior surface, well up under the ribs, in a line with the incision, was felt a spot somewhat softer than the surrounding surface. A similar spot, about the size of a silver dollar or a little larger, was also felt on the under surface about a finger's length above the lower border. Both Dr. Osler and Dr. Temple felt these same soft spots, and while none of us could get any fluctuation, Dr. Osler thought it advisable to put in a small aspirating needle and make sure that no pus was there. Only blood came away.

The gall-bladder was examined and appeared normal. Evidently no large amount of pus was present at any one spot. Dr. Osler felt now, after his examination, that it was a case of pylephlebitis, one of the conditions which he thought must exist the first time he saw the patient. But, said he, there must have been a starting point for the pylephlebitis, and with a view of finding it, he made a digital exploration of all the organs within reach through the four inch opening. The pancreas, kidneys and capsules, spleen, and gastro-hepatic omentum, were carefully felt in turn and nothing abnormal found. He then introduced his hand and arm and felt for the cæcum and appendix. It was not found at the usual site, but after patient search he exclaimed, "Here it is, and a thick inflammatory wall about it. This is the origin of his liver trouble."

Absolutely nothing could be felt from the outside, even after the mass was located by Dr. Osler. He said the mass was about the size of a very small orange, and evidently included the

appendix. I then cut down through the abdominal wall, making an incision about 2½ to 3 inches long parallel with and just above Poupart's ligament. The peritoneum was recognized after a little difficulty and pushed inward out of the way. It was only after I had torn and separated the normal tissues to the depth of at least a finger's length, keeping close to the bone, that I came to the mass. With Dr. Osler's hand still in the abdomen, and his fingers as a guide, I was able to tear the thick inflamed abscess-wall with my finger-nail. I felt that the finger was in a thick-walled cavity, and on withdrawing it the odor was distinctly fœcal. The cavity was then flushed out with hot boiled water, and a large drainage tube put in. While I was attending to washing out the abscess, putting in the tube, and a few stitches afterwards, Dr. Temple was saving time by suturing the incision over the liver.

Keith's dressing and iodoform gauze were put over the upper wound, and iodoform gauze and absorbent cotton over the lower one, and outside of all a flannel bandage. His pulse was pretty shaky towards the end of the operation, and whiskey was given freely as soon as he was able to swallow it.

The next morning I was told that at 1.30, 4.00, and 7.00 a.m., he became very weak and collapsed. He rallied somewhat from the first and second collapse, but had never been able to rally after the third. He was sinking. He said he had no pain, and always replied to any question.

He died between 2.00 and 3.00 p.m., twenty-four hours after the operation.

Aug. 31st. *Post mortem* examination twenty-four hours after death. On opening the abdomen the intestines were seen distended and slightly glued together on the right side. They were easily separated except in the region of the groin. The liver was nearly double the normal size. The whole of the upper surface had a very slightly mottled appearance. On pricking the light colored spots a minute amount of pus would well up, and if these were followed inwards, they were seen to be the terminations of the minute branches of the portal vein, and could, with careful dissecting, be traced to the larger vein—in short, there was well marked pylephlebitis. These vessels appeared to be *filled* with pus. A very few pus cavities, the size of peas, were seen scattered throughout the liver. On the under surface of the right lobe was a small projection half the size of an acorn, which was filled with pus.

The three punctures made by the aspirating-needle were easily recognized. One of them had gone through the edge or border of the diaphragm and was the cause of the stitch-like pain he had after aspirating. The mesenteric veins were also inflamed and filled with pus, and could be traced downwards towards the pelvis for some inches. The kidneys were enlarged and slightly congested. The spleen was only slightly enlarged; as Dr. McPhedran said, a very unexpected condition considering the amount of pyæmic absorption.

In the right side of the pelvis were many old and firm adhesions. The omentum was firmly adherent to the intestines, and the intestines matted together. Below the level of the upper margin of the true pelvis was an abscess cavity, surrounded by thick walls and extending inwards to the bladder. It was shallow antero-posteriorly, and would scarcely hold two ounces. In the centre of this cavity, or rather running into it, was seen the appendix, the free end of which was in a semi-gangrenous condition. The appendix was about 4½ inches long. The parts were so much matted together that there was some tearing in getting up the cæcum and appendix. On this account it was impossible to say whether the drainage-tube inserted the day before would have been sufficient to drain the parts properly had he lived. So much pus gushed up on elevating the cæcum that it was thought there must have been a second cavity with which the tube did not connect. It is more than probable that the original appendicitis was not of very recent date. The appearance of the thick-walled abscess-sac, and the firm adhesions, indicated this.

A number of points of more than ordinary interest strikes one on going over this case. Some of the principal ones are:

1. The resemblance of malarial fever in the early stage of the illness. From the 22nd July to 1st Aug.—twelve days—he had six chills exactly 48 hours apart. Besides this he had been living at the island, with a lagoon almost surrounding the house.

2 The large amount of quinine which he took before producing marked cinchonism—gr. 10 o.h. 3 for three days, and then every two hours for another day.

3. The irregular chills during the first week in August; the appearance of the stools; the temperature ranging from 100 to 102, with pulse only a few beats above normal; the prevalence of typhoid in the city and island at that time —all these lent color to the theory of an irregular typhoid.

4. The peculiarity of the jaundice; its becoming more marked during the fever stage, and fading perceptibly as soon as the perspiration started.

5. The absence of pain or tenderness over the liver.

6. The existence of the appendicitis and resulting abscess without pain, tenderness, or the knowledge of the patient as far as could be learned. Neither father nor mother had ever heard him complain of pain in this region, and yet this inflammation must have been there while he was doing business in the city, rowing to and from the island every day.

7. The cæcum and appendix could not, with any degree of positiveness, be felt externally, even with Dr. Osler's hand in the abdomen to guide one to it. Neither do I think it could have been reached per rectum, lying as it was internal to and on a level with or just below the ilio-pectineal ridge.

8. Knowing the condition of the liver, it seems scarcely possible that a man could live an hour with his portal and mesenteric veins almost filled with pus as in this case.

DISCUSSION IN SURGERY AT THE BRITISH MEDICAL ASSOCIATION.

COMMUNICATED BY G. A. PETERS, M.B., F.R.C.S. ENG.

THE SURGERY OF THE LARGE ARTERIAL TRUNKS

Was the subject introduced by Mr. Timothy Holmes, of St. George's Hospital, London. In a very able and concise manner, Mr. Holmes reviewed the various opinions that have been held in modern times upon this very important subject. In the earlier days it was regarded as of indispensable importance that the ligature should be sufficiently broad, soft, and large to occlude, without injuring the coats of the vessels. After a period during which opposite views prevailed, we are now asked to return to the old practice. Old surgeons injured the vessels as little as possible, and now, after an interval during which Jones' advice, to tie tightly enough to divide the internal and middle coats was followed exclusively, we are returning to the practice of our forefathers.

The material for the ligature should fulfil the following conditions: (1.) It should be trustworthy. (2.) It should be unirritating. (3.) It should be soft enough to tie easily and smoothly. (4.) It should be firm enough to retain the knot. (5.) It should be soft, flat, and large enough to close without injuring the vessel. The substances which have these essential properties are silk, catgut, ox-aorta, and kangaroo-tendon. Silk is good, but it cannot be absolutely relied upon to prove unirritating, and the time required for its absorption is too great. Catgut, as ordinarily prepared, cannot be relied upon either to be strictly aseptic, or to be trustworthy as to uniform strength. Owing to the peculiar manner in which it is prepared, some parts are apt to be weaker than others, and it also contains interstices, which may be the lodging place of germs. It is greatly improved, however, by treatment with chromic acid, which increases its resistance to the absorptive properties of the living tissues, and effectually renders it aseptic. Ox-aorta is admirable. He had used it to tie the external iliac artery and in many other cases with perfect satisfaction. Kangaroo-tendon, however, is equally reliable, and is smoother and more manageable. It is in use largely in St. George's Hospital. The tendon remains trustworthy in the tissues for at least two months. Aorta and tendon ligatures may accordingly be considered the best for ligating the large trunks in their continuity, but catgut may be used with satisfaction upon the faces of stumps.

In discussing the amount of injury that should be inflicted upon the artery, he recalled the practice of Hunter, who held that the ligature should be drawn tightly enough to check pulsation below the point of its application, but not sufficiently tight to injure the coats. The effect of the experiments and teaching of

Jones, however, was to lead to the almost universal practice of dividing the two inner coats by means of the ligature. The formation of the internal clot which this induced was considered a great safeguard against secondary hemorrhage, but it has been abundantly shown that the presence of an internal clot after ligature is not by any means constant, and moreover, that its presence is not essential in preventing secondary hemorrhage. Undoubtedly the best safeguard against secondary hemorrhage is the rapid union of the soft parts around the seat of ligature. Hence the necessity for an unirritating ligature, and perfect rest of the parts after operation. It may, however, still be considered an additional safeguard to tie the artery tightly, particularly on the faces of stumps.

As to whether it is advisable to follow the practice introduced by Abernethy, in 1797, of tying the artery in two places and dividing it between or not, cannot be considered as definitely settled. Abernethy's plan is still universally practiced at St. Bartholemew's. Without doubt, in all cases of injury, whether the artery has been cut partially across or merely bruised, this is the line to be adopted. The great argument in favor of this method is that it places the divided artery in a state of relaxation. But while it is certain that the cut ends retract somewhat on division, it does not by any means follow that the uncut vessel is in a state of tension. On the contrary, the diversion of the blood through the collateral vessels will leave the tied vessel empty and relaxed. Again the simple division of the vessel affords no protection against secondary hemorrhage, but introduces a fresh element of danger in the possibility of slipping of the ligature—a danger which is not merely imaginary.

As a matter of fact, secondary hemorrhage in these days, when we can secure with almost absolute certainty the union of the soft parts by first intention, is extremely rare. The chief dangers to-day are from phlebitis and gangrene, and the comparatively extensive dissection necessary to the preformance of Abernethy's operation unquestionably increases the risk of phlebitis from injury to the vein, and of moist gangrene consecutive to this.

In reference to the treatment of aneurism, various methods of operating are advised by different surgeons. In 1886, Sir William Savory gave the weight of his authority in favor of Anel's operation of tying the artery between the aneurism and the first large branch between it and the heart. In Hunter's operation of tying the artery between the heart and the first considerable branch above the aneurism, it is found that the artery, contrary to the usual teaching, is not obliterated for the whole distance between the ligature and the aneurism. On the other hand, there is obliteration for a distance varying from 1½ to 2 inches on each side of the ligature, then patency for a variable distance upon the proximal side of the aneurism, and again obliteration at the seat of the aneurism. Hence it is that movement--not amounting to pulsation—is frequently observed in the aneurism for some time after the ligature is applied after the plan of Hunter. But so far from being baneful, it is certainly beneficial that this diminished flow should continue for a short time, as in this way a more solid laminated clot is formed in the aneurism. Another objection that may be urged against Anel's method is the probability of the coats of the artery being diseased near the dilated parts. This danger is however, very much exaggerated by many surgeons who write upon this subject. The advocacy of Anel's method, however, rests rather upon theory than experience. In the vast majority of cases, tying the superficial femoral for popliteal aneurism is found to be followed by cure. Two anastomotic arches are formed by the collateral circulation, one to convey the blood around the seat of ligature, and the other to carry it beyond the obliterated aneurismal sac. In despite of these facts Sir William Savory advocates tying the artery immediately above the sac in the case of popliteal aneurism. This cannot be recommended, as the injury to the sac may cause sloughing or gangrene. It is worthy of remark that Annandale, of Edinburgh, has recently reported several cures by the "old operation," viz., that recommended by Antyllus, of laying open the sac and securing the artery above and below.

When secondary hemorrhage occurs after any operation involving ligature of a large trunk, the choice of the surgeon must lie between pressure by bandaging, re-tying the bleeding

vessel, ligating higher up, or amputation. It is impossible to lay down any rules in such cases; each case must be treated upon its merits. If pressure fails it is very often better to resort to amputation than to subject the patient to the risk of repeated hemorrhages.

Professor Bennett May, of Birmingham, is highly in favor of animal ligature, which we are able to leave to the disposal of the tissues. Silk commonly leaves a sinus which refuses to close before the ligature comes away. With catgut ligature it is necessary to tie tightly enough to divide the inner coats, but by the use of ox-aorta or kangaroo-tendon this may be avoided. He has, however, had a large percentage of cures from the catgut ligature tied tightly. When there is a large stretch of artery such as in the common carotid or external iliac, he prefers to use a silk ligature, one end of which he leaves long. On the other hand in operations on the subclavian or innominate, where there are large branches given off near the seat of ligature, he prefers to use ox-aorta or tendon ligatures, which he ties loosely enough to leave the inner coats uninjured. The large knot formed by these ligatures is a disadvantage, however, as was illustrated in a case in which a patient died from secondary hemorrhage some weeks after ligature of the innominate with tendon. *Post mortem* examination revealed the fact that the impact of the blood against the unresisting knot had gradually worn through the wall of the vessel. He thinks Abernethy's plan of division of the ligated vessel is quite unnecessary.

Mr. Herbert Page, London, related a case of double femoral aneurism which was cured by deliberate manipulation to break up and displace a portion of the laminated clot in the aneurism, after the plan recommended and practised by Sir Wm. Fergusson. In a second case of double popliteal aneurism, as the patient was on the verge of delirium tremens, and the aneurism on the left side was growing very rapidly, threatening gangrene of the leg, it was deemed advisable to amputate in the lower third of the thigh. Recovery followed, and the aneurism on the right side was subsequently cured by a Hunterian operation. He was of opinion that had it not been for the critical constitutional condition of the patient, the old operation would have been advisable in preference to amputation, as by this means the obstacle to the return of venous blood would have been removed.

Dr. William Thompson, Dublin, favored temporary pressure on the proximal side of the aneurism, and stated that a large amount of success had followed this method of treatment in Dublin. In case of ligature being called for, he preferred not to divide the inner coats, as a ligature which was tied tight enough to do this, also strangulated the outer coat. The material to be used varies in different cases. For ligation in continuity he expressed a preference for aseptic silk. He had found chromic catgut to keep up irritation, and had seen secondary hemorrhage follow its use. He was not disposed to favor Abernethy's method, as it was unsafe to place two ligatures closer than one inch apart, and this necessitated a long incision, and a dangerous amount of exposure both of the artery and vein.

Mr. Damer Harrison considered that the condition of the catgut depended on its preparation, and recommended that the surgeon should prepare his own. He considers it safer to divide the inner coats, and objects, that owing to the elasticity of the ox-aorta, considerable experience is required to know how much force is required to be used in using that material.

Dr. H. O. Marcey, of Boston, has experimented largely with different materials. He finds that silk is rapidly encapsulated even in very young animals. The best catgut is that prepared from the mountain sheep of Italy, but as it becomes a seething mass of putrefaction in process of preparation, special care is required to render it aseptic. Its fibres run in an oblique direction, and hence it is elastic. The fibres of kangaroo-tendon run in parallel lines, and accordingly this material is strong and inelastic. He has found that the catgut ordinarily sold for use as ligatures gives rise to various growths of organisms when cultivated on gelatine plates. Kangaroo-tendon does not cause suppuration, not does it give rise to growths on gelatine. Dr. Jameson, of Baltimore, used ligatures of buckskin many years ago with success. This material was also used by Sir Astley Cooper.

Dr. C. T. Parkes, Chicago, used silk fifteen years ago in ligature of the femoral with success, and has also successfully applied a catgut ligature to the subclavian. The material used is not of great importance provided suppuration can be prevented.

Mr. Augustine Pritchard, Clifton, considers ligature of the superficial femoral a comparatively safe operation. He always divides the inner coats. He has in one case used temporary ligature of the vessels, applied by slipping a silver tube over both ends of the ligature which was passed around the vessel but not tied. By drawing on the threads and pressing down tube the artery was kept occluded for three days, after which the ligature and tube were withdrawn. Recovery followed.

Mr. Bartleet, of Birmingham, President of the Section, considers that the nature of the material is unimportant, provided it is unirritating and permits of rapid healing. He related two cases in which secondary hemorrhage followed ligature of the femoral with catgut. In one the vessel was ligatured higher up, and the other a ligature was applied to the external iliac. Recovery took place in both cases, showing that amputation is not invariably called for in these cases. Mr. Holmes in reply thanked the section for the kindly reception accorded him.

AUTO-INFECTION.

BY JOHN CAVEN, M.D., L.R.C.P. LOND.,
Lecturer on Pathology, University of Toronto.

Judging by the results of recent investigations in bacteriology, we are justified in assuming that hereafter the surgeon in his operations must take account not only of infective organsms which may be introduced from without during operative procedure or the process of wound-dressing, but also of others which may have their abode, unfortunately, within the body of his patient. Many of the forms of micro-organisms which have their *habitat* with in the human body—and these forms are numerous—will doubtless be found capable of originating sufficiently serious symptoms when the opportunity is afforded them, although hitherto considered harmless, or at least not proven to have pathogenic properties.

One of the commonest forms of bacteria found in the healthy human body is the *bacterium coli commune*, inhabiting the intestine. Tavel, of Berne, having come to the conclusion that auto-infection had taken place in a surgical case of his own which did badly, undertook a series of investigations in connection therewith, and ultimately decided that the infection had been from the intestine, and that *bacterium coli commune* was *probably* the offending microbe. Later he was afforded an opportunity in connection with a case operated upon by Kocher of strengthening his position. Kocher's case was one of cystic goitre. After operation with antiseptic precautions, the patient progressed favorably for nine days, healing of the wound taking place by first intention. Then redness appeared along the healed line of incision, the tissues softened and finally suppuration supervened, with constitutional symptoms. Examination of the discharge discovered the presence of the *bacterium coli commune* and subsequent experiments showed that in certain animals pure cultivations of this germ produced fatal septicæmia, the blood and internal organs teeming with the microbe. From these facts it was concluded that the *bacterium coli commune* could, under proper conditions, interfere very materially with the success of surgical operations.

Last year Dr. G. Winter gave out the results of his work on the mycology of the sexual organs of women in health (*Zeitschrift für Geburts. u. Gynak.*) He found that whilst the fallopian tube and cavity of the uterus contained no micro-organisms, the internal os, cervical canal, and vagina, were the seat of numerous forms of microbes, staphylococci predominating. These he holds to be identical with various pathogenic forms, although his inoculation experiments gave no positive results. His explanation of the failure of these experiments, and it seems a feasible one, is that by living on a healthy mucous membrane the virulence of the germs has been attenuated, and that they are accordingly too weak to produce such an effect as results when inoculations are made with cocci taken from putrescent matter, their natural *habitat*.

In 1861, Prof. Verneuil noticed the fact that the fluids found in hernial sacs were very irritating to sound tissues. This was apparently

lost sight of again until last year when M. Clado investigated the fluid found in the sac in a case of strangulated hernia. He found bacilli in the fluid. Within an hour of the operation his patient was dead, and the blood, peritoneal serous fluid, and the viscera, especially spleen, were found to contain the same germ in great numbers. The microbe was found also in the strangulated intestinal tissue, in its blood vessels, lymphatics, and glands. Cultivations of this germ made at 37.40° C. caused rapid death in animals, as did also inoculations with the blood of the patient. Inoculations with blood and serum from the first set of animals used, produced the same effects in a second series. Further investigation is no doubt required in connection with this question of hernial infection, but certainly the results obtained are very suggestive, not only of the dangers to which such cases are exposed, but of the direction which efforts to lower the mortality following operations for their relief must take. Still more recently, Prof. Verneuil has demonstrated the presence of a variety of micro-organisms in various malignant neoplasms (*Revue de Chirurgie*, Oct. 1889). Whilst not accepting any of these microbes as standing in a causal relationship to the new growths in which they are found, he still attaches considerable importance to their presence. He thinks that—

(1.) The microbes modify the nutrition of new growths, accelerate their growth, incite to cellular proliferation, and are the principal agents in causing pain, softening, and ulceration.

(2.) These microbes are endowed with intrinsic pathogenic properties, in virtue of which they react on the economy in certain cases after the manner of septic poisons.

To be Continued.

Selections.

ACROMEGALY, OR MARIE'S DISEASE.

THESIS OF M. SOUSA LEITE.

This disease is very rare, as may be judged by the fact that only thirty-five cases have been recorded.

Four classes of symptoms attract attention in acromegaly:

1. The patient's hands are thick, broad, massive; the soft parts on the palmar surface are prominent, padded-looking; the fingers are of the same thickness throughout their whole length. Curiously enough, notwithstanding their thickness, there is no notable increase in the length of the hands or fingers. The hands are veritable battledores, and the fingers sausages in appearance. The other segments of the upper limbs and the lower extremities may also be enlarged, but to a lesser degree.

2. The face is changed in an extraordinary manner; it is long and oval; the forehead is low and rests on enormous frontal eminences; the nose is often of a large size; the cheek-bones are prominent, and the lower maxilla much deformed; the chin is large, forming a marked protuberance directed to the front and downwards, which helps to give the strange appearance to a patient suffering from this disease; the upper maxilla, on the other hand, is but seldom attacked; the lips are thickened, especially the lower one, which is projecting and everted; the mouth often gapes, revealing the tongue, which is increased in breadth and thickness.

3. The trunk, in certain cases, presents either kyphosis or lordosis, and in front a protuberance more or less marked which often produces the appearance of a double hump.

4. The subjective symptoms observed at the same time are headache, pains in the bones or in the joints, suppression of the menses, dimness of vision, excessive thirst and desire for food, often polyuria, and sometimes glycosuria. Finally, many of these patients complain of weakness and general lassitude; they become morose and often have a tendency to suicide.

In a general way the disease comes on during adolescence, or in commencing manhood, most often about the 20th year. According to Marie, it is never congenital. It begins slowly, with progressive hypertrophy of the extremities and of the face. No symptoms attract the attention of the patient at the beginning of the disease, and it is often the physician which calls attention to its presence. Certain details give occasion to some remarks: a ring becomes too small, the hat, gloves, or boots, are put on with difficulty; one patient who played the violin was obliged to abandon this instrument, the fingers having become too large, and he took to

playing a wind instrument, but he was soon obliged to have the mouth-piece changed, as it had become too small for his thickened lips.

Once established, the disease advances very slowly, with periods of quiescence followed by exacerbations; little by little the hands and feet attain their enormous, almost monstrous, size; the face and trunk are then involved. A true cachexia may come on towards the last, and the patient sometimes succumbs to syncope and probably to cerebral compression. Some intercurrent affection may shorten the duration of acromegaly which lasts ten, twenty, thirty years, or even more. We are in almost entire ignorance as to the pathogenesis of the disease. —*Journal de Médecine de Paris*, Sept. 14, 1890. —G.A.F.

THE NECESSARY PEROXIDE OF HYDROGEN. —Stop suppuration! That is the duty that is imposed upon us when we fail to prevent suppuration. As the ferret hunts the rat, so does peroxide of hydrogen follow pus to its narrowest hiding place, and the pyogenic and other microorganisms are as dead as the rat that the ferret catches when the peroxide is through with them. Peroxide of hydrogen, H_2O_2 in the strong 15-volume solution, is almost as harmless as water, and yet, according to the testimony of Gifford, it kills anthrax spores in a few minutes. For preventing suppuration we have bichloride of mercury, hydronapthol, carbolic acid, and many other antiseptics; but for stopping it abruptly and for sterilizing a suppuration wound, we have only one antiseptic that is generally efficient, so far as I know, and that is the strong peroxide of hydrogen. Therefore I have qualified it, not as "good," not as "useful," but as "necessary." In abscess of the brain, where we cannot thoroughly wash the pus out of tortuous canals without injuring the tissues, the H_2O_2, injected at a superficial point, will follow the pus, and throw it out, too, in a foaming mixture. It is best to inject a small quantity, wait until foaming ceases, and repeat injections until the last one fails to bubble. Then we know that the pus cavity is chemically clean, as far as live microbes are concerned. In appendicitis, we can open the abscess, inject peroxide of hydrogen, and so thoroughly sterilize the pus cavity that we need not fear infection of the general peritoneal cavity if we wish to separate intestinal adhesions and remove the appendix vermiformis. Many a patient, who is now dead, could have been saved if peroxide of hydrogen had been thus used when he had appendicitis. This single means at our disposal allows us to open the most extensive psoas abscess without dread of septic infection following. In some cases of purulent conjunctivitis we can build a little wall of wax about the eye, destroy all pus with peroxide of hydrogen, and cut the suppuration short. Give the patient ether if the H_2O_2 causes too much smarting. It is only in the eye, in the nose, and in the urethra, that peroxide of hydrogen will need to be preceded by cocaine (or ether) for the purpose of quieting the smarting, for it is elsewhere almost as bland as water. It is possible to open a large abscess of the breast, wash it out with H_2O_2, and have recovery ensue under one antiseptic dressing, without the formation of another drop of pus. Where cellular tissues are breaking down, and in old sinuses, we are obliged to make repeated applications of the H_2O_2 for many days, and in such cases I usually follow it with balsam of Peru, for balsam of Peru, either in fluid form or used with sterilized oakum, is a most prompt encourager of granulation. If we apply H_2O_2 on a probang to diphtheritic membranes at intervals of a few moments, they swell up like whipped cream and come away easily, leaving a clean surface. The fluid can be snuffed up into the nose, and will render a fœtid ozœna odorless. It is unnecessary for me to speak of further indications for its use, because wherever there is pus we should use peroxide of hydrogen. We are all familiar with the old law: "*Ubi pus, ibi evacua*," but I would change it to read, "*Ubi pus, ibi evacua, ibi hydrogenum peroxidum infunde.*" That is the rule. The exceptions which prove the rule are easily appreciated when we have them to deal with. Peroxide of hydrogen is an unstable compound, and becomes weaker as oxygen is given off; but Marchand's 15-volume solution will retain active germicidal powers for many months, if kept tightly corked in a cool place. The price of this manufacturer's preparation is about 75 cents per pound, and it can be obtained from any large drug house in this country. When using the H_2O_2 it should not be allowed to come in contact with

metals if we wish to preserve its strength, as oxygen is then given off too rapidly. H_2O_2 must be used with caution about the hair if the color is a matter of importance to the patient, for this drug, under an alias, is the golden hair-bleach of the *nymphs du pave*, and a dark-haired man with a canary-colored moustache is a stirring object.—Robert T. Morris, M.D., New York, in the *Jour. Amer. Med. Association*, Aug. 9th, 1890.

NOTE UPON CONCEPTION WITH UNRUPTURED HYMEN.—(By W. Macfie Campbell, M.D., Liverpool, before the Edinburgh Obstetrical Society, April 9th, 1890.)—Some months ago a young lady was brought to me, by a relative of the young man to whom she was engaged, as she had not felt well lately. Something about her appearance caught my attention as she entered the room, and I made inquiry as to her menstruation as soon as possible. She had not been unwell for three months, but that had occurred before—she was listless, tired, breathless, and did not know what she felt. She said she was always plump, and did not think her bust or figure increased. Examination of the mammæ revealed dark areolæ, distended cutaneous veins, and a milky fluid was easily expressed from the nipples. By the stethoscope the fœtal heart was readily detected. I thought it prudent to ask the relative to step into another room, and then told my patient that she was pregnant. I have frequently had to make such an announcement, but have never seen it received with such amazement and incredulity. "Utterly impossible," she said, but still with something in the expression which meant that there was a possibility. Still insisting, she told me that opportunity having twice offered, her fiance had got into her bed, and had imperfect intercourse with her. No penetration nor attempt at penetration had been made. This was afterwards corroborated by the young man, whom I sent for. On examination, the blue appearance of the vulvar mucous membrane was well marked, and the hymen was perfect, but admitted the forefinger without causing much pain. The young man was so positive, that I saw he feared some other paternity, but I could assure him that she was virgo (!) *intacta*. The parties were married soon after, and it was not until six weeks after that, that penetration was effected, with a sensation of rupture. Some years ago I had two confinement cases within a few days, in which both husbands told me they could not understand their wives' pregnancy, as intercourse had never been perfect. In one case I had to divide the distended hymen bilaterally to allow the head to emerge; in the other there was no great difficulty in dilatation. Dr. Gooch (Important Diseases Peculiar to Women, Sydenham Society, 1859) relates a case of a lady privately married, in whom he diagnosed pregnancy, and was met by the statement of impossibility. Her husband had avoided injury to the hymen, and both considered pregnancy impossible. The event, however, proved Dr. Gooch to be right. In the *Medical Times* and *Gazette*, vol. i., 1876, Dr. Braun, Vienna, gives three instances of the same. In the first case coition had taken place in a dilated urethra, and Dr. Braun supposes ejaculation had taken place prematurely. Delivery took place without injury to the vagina, the hymen rupturing at the last moment. In the second case, a girl of 16 years confessed to one imperfect attempt at intercourse. The orifice in the hymen only admitted a goose quill. The third case was exactly similiar in age and history. Dr. Braun draws the following conclusions briefly, that—1st, An unruptured hymen is no proof of virginity; 2nd, An individual may exist as a virgin in the anatomical, though not in the gynecological sense; 3rd, Pregnancy is possible without penetration. In the same journal, vol. ii., 1881, Surgeon-General Francis relates the case of an officer's wife, in whom pregnancy was declared impossible by husband and wife, the reason being a tense hymen, which had resisted penetration, and which only gave way after a long delay in delivery. These cases are of great interest, as throwing doubt upon the theories of uterine activity in the act of impregnation, and of exact apposition of the orifices of the urethra and cervix as being necessary, and rather point to the entrance of the semen into the uterus, and further, as being due to inherent forces, or ciliary action of the vaginal mucous membrane. —*Edinburgh Medical Journal*

THE PROGRESS OF BIOLOGY IN CANADA

We have before us the official account of the formal opening of the new building of the Bio-

logical Department of the University of Toronto, on December 19 last. The building is a substantial stone one in Scottish Norman style, replete with the most modern fittings and accessories; and the lecture hall, which may be approached independently of the main edifice, is benched to seat a minimum audience of 250. The work of the institution is presided over by Prof. R. Ramsay Wright. The classes in biology are said to be among the largest in the University, and the excellence of the new arrangements and teaching appliances elicited, at the opening ceremony (from Prof. Osler, an old student of the parent college), the remark that "it is possible for one to live through a renaissance, similar perhaps in kind, less important in degree, than that" directed against mediæval thought. May this be justified! Certain it is that the biological work now in progress in Toronto was begun under most auspicious circumstances.

Prof. R. Ramsay Wright is well-known and respected in this country, and, at the opening of his new building, allegiance was sworn him by Minot and other biologists of the New World, whose published researches, like his own, rank high in contemporary literature. Investigations like those upon the spiracular cleft of Ganoids, the nervous system of the tadpole's epiderma and of the liver, which his school has given to the world, are not to be easily matched as thoroughgoing and honest pieces of work. They denote a high standard of attainment, and one which, in face of the inanities of certain transatlantic workers of another type, must be maintained if the biological brotherhood of the New World is to hold its own.

The Biological Department of the University of Toronto exists in connection with a Medical School, and it is therefore not surprising to find signs of a leaning towards bacteriology and those allied branches of study which, as being furthered by Mentschnikoff and his pupils, by Darier, Podwyssozki, Neisser, Ruffer, Macallum, and others, are just now assuming a revolutionary phase. Indeed, the key-note was struck by Prof. Wright in the peroration to his opening address, in which he said that "not only bacteria, but low forms of animal life furnish important pathogenic organisms." We rejoice in this the more now that an outcry against the biological training of the surgeon-student is being raised at home by persons who clamor for the restoration of an apprenticeship system. From the utterances of distinguished medical experts made at the Toronto ceremony, it is certain that this proposal will meet with no response from the New World.

The Biological Institute of Toronto is detached from the main University building. The latter was, on February 14th last, almost wholly destroyed by fire. During the preparations for the annual conversazione, a wooden tray covered with lighted lamps fell to pieces while being carried; a lamp was upset, and although the burning mass was heroically carried towards the exterior by the sub-curator and a caretaker, the building, its valuable contents, museums, and books, were for the most part destroyed. Prof. Wright has been for some months on a tour of inspection in Europe, seeking, among other things, gifts of specimens and books. Truly, our Canadian brethren do not deserve these unless better able to take care of them than in the past. Prof. Wright assures us that such will be the case, and, on his behalf, we appeal to specialists and others who may be possessed of duplicates, and to those who may be otherwise willing, to help. The position is one which threatens to injure seriously the educational prospects of a rapidly advancing country to which we, at home, are much beholden; and it calls for combined action, by which alone a loss such as that we deplore can be made good.—*Nature*, Oct. 9th, 1890.

THE DOSAGE AND ADMINISTRATION OF CREASOTE IN PHTHISIS.—Dr. W. H. Flint, of New York, has arrived at the following conclusions, as a result of reading and personal experience. 1. Intrapulmonary and intra-tracheal injections of creasote are of doubtful utility, and may be positively injurious. 2. For administration by mouth or rectum, solutions and emulsions are preferable, in most cases, to capsules, pills, or wafers. 3. Milk is an excellent vehicle for the administration of creasote in solution or in emulsion. 4. Each method of administering creasote used by the writer—viz., by inhalation, by mouth or rectum alone, and by both simultaneously—is useful, and may each be

particularly adapted to individual cases. In suitable cases the most rapid progress seems to be made when all these ports of entry are utilized. 5. The best results for each individual attend the administration of the maximum quantity of creasote which the patient can bear. 6. The average patient will not easily tolerate more than ten or fifteen minims of creasote *per diem* for any great length of time, and many will only bear two or three drops *per diem* continuously administered. 7. It is very important that the treatment be uniform and uninterrupted. 8. Consequently, an effort should always be made, if intolerance of creasote is shown by any one mucous surface, to employ some other channel of introduction, in order that continuity of the treatment be not interrupted.—*Coll. and Clin. Rec.*

A PECULIAR CASE OF IDIOSYNCRASY TO THE EXTERNAL USE OF TANNIN.—Lange, of Copenhagen, with a 1 in 15 solution of tannin, painted the throat of a patient suffering from chronic naso-pharyngeal catarrh. Immediately after the application great swelling of the mucous membrane took place, complete stoppage of the nose, and a considerable watery secretion. There was considerable œdema of the soft palate and uvula, the latter resting on the back of the tongue. An hour later there was some numbness, and an unbearable itching of the whole surface of the body, and an urticarial eruption appeared. At the end of twenty-four hours nearly all these phenomena had disappeared. The patient reports that he had observed these results on two former occasions after the application of tannin solution.—*Deutsch. Med. Wochenschr., 1889, 91. Centralbl. f. Klin. Med., 1890, 26. Medicinisch-Chirurgische Rundschau, Aug. 1st, 10.— G.A. F 89.*

INDUCTION OF ABORTION FOR UNCONTROLLABLE VOMITING.—Dr. Pugliatti, of Novara, recommends that in cases of hyperemesis gravidarum, where milder means have failed, abortion should be induced in the following manner: A bougie about two-fifths of an inch thick is pushed upwards to the extent of two inches into the uterus. After two or three hours this bougie is replaced by another slightly thicker, and, after the same space of time, a third, thicker than the second, is introduced. This last bougie is left in until distinct uterine contractions are set up. This method, according to Dr. Pugliatti, is free from danger. The membranes are not damaged, and in the worst cases there remains the great advantages that the lower uterine segment has been brought into a condition favorable for further proceedings.—*Brit. Med. Jour.*

THE
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TORONTO, DECEMBER 1, 1890.

THE ADVANCEMENT OF AMERICAN MEDICINE.

The opening address of the Medical Faculty of the University of Pennsylvania was recently delivered by Professor Piersol, and devoted to the above topic. It contains much encouragement for those who have the interests of the progress of medical education in this Province at heart, as it discloses a community of feeling, on this important subject, between the Faculty of one of the oldest established American universities and the authorities of the University of Toronto.

The following quotation regarding the preliminary education best fitted for a medical student bears this out: "As far as the acquisition of a professional education is concerned, a fair measure of success is bound to follow energetic and honest application by every one well equipped for the reception of the requisite training. By well equipped I mean not only the possession of that necessary general knowledge and culture essential for the board—liberal education, so desirable as a foundation for the technical acquirements to be added—but more especially the possession of trained faculties of accurate observation, particularly of natural phe-

nomena, and of drawing logical deductions from the same. That such powers are best stimulated and developed by a serious study of the natural sciences, there can be but little doubt. Not the mechanical, and too often meaningless, class-room recitations, but by the live, active training gained by personal examinations and observation in the laboratory and in the field. Since medicine, both as an art and as a science, depends so largely upon direct observation, the cultivation of those faculties by which such fundamental data are obtained is of primary importance."

Prof. Piersol claims that a comparison in this regard between the American and German universities is very much to the advantage of the latter. He thinks the German institutions furnish the most thorough and comprehensive system of medical education of the present day, and attributes this in part to concentration (with a population of about one and a third times that of Germany, the United States have 126 as against 20 medical schools), and in part to the greater attention devoted to science, both in the schools and in the universities. "So important," he says, "for the training of the medical student are the natural sciences regarded by the educational authorities of this latter country that, not content with the attention bestowed on these branches, as part of the work of the gymnasium and realschule, botany, zoology, and physics, are prominent among the studies to which the first four semesters are devoted, and in which, together with anatomy, physiology, and chemistry, the first examination of the medical course —the 'physecum'—is held."

There is no question but that these fundamental sciences are better attended to on the continent of Europe. Prof. Piersol, however, points out that "our students should not be held responsible for the differences, but rather the prevailing system of preparatory education, and the inadequate provisions made to supply the deficiencies. As long as our advanced schools fail to ground their pupils in the natural sciences, and our colleges to include biological studies among the required subjects of their curriculum, so long will our medical classes be composed largely of men lacking this important training. A lad may enter at nine years of age and pass through the entire prescribed course of study of our most reputable schools, and subsequently take his college degree, without having turned a page, or having listened to a single lecture, pertaining to biology.

"It must be said just here, in justice to this institution, as well as to some other universities and colleges, that, by a judicious selection of elective branches, the student who has already determined to adopt medicine as his profession may secure to himself much valuable training in biological study; unfortunately, however, it often happens that the selection of medicine as a profession is made too late to profit by these opportunities, and, unless additional time be appropriated, the college graduate enters upon his professional course without that particular discipline which his years of study should have guaranteed. Had it been possible for each of you to have passed through a course of study similar to that afforded by our own or other biological schools, I am confident that the time devoted to such preparations would have been amply repaid, not only in the knowledge and training directly obtained, but likewise in the higher and more expanded plane from which your professional studies would have been approached."

An increasing number of students are beginning to avail themselves of the facilities offered by the Natural Science course of the University of Toronto to take a degree in Arts, through a channel which admirably prepares them for their future profession, before proceeding to their medical education proper. It is questionable indeed whether the privileges of reducing the four years course in medicine to three years, at present extended, in Ontario, to all graduates in Arts, should be allowed to any who have not devoted special attention to scientific studies during their course.

Referring to the deserved reputation of the American nation for "practicalness," Prof. Piersol fears that that very virtue sometimes leads to depreciation of principles:

"The successful practitioner, the representative, it may be, of several generations of widely useful men, is too often inclined to question the value of studies unknown to his forefathers, and of which he himself has learned little more than the names; to him the many additions occupying prominent places in the latest announcement

of his alma mater are, at best, imported novelties of imaginary consequence. The advice of such physicians to younger men seeking counsel on entering upon their medical studies, is, too frequently, to expend the least possible time and energy on these 'theoretical' branches, devoting the attention to the far more useful, 'practical' subjects.

"Let me most earnestly warn you against adopting notions so mistaken, and so out of harmony with the convictions and conclusions of those best qualified to decide upon the combination of studies most desirable for your professional education; not only for your preparation to cope successfully with disease, but as giving you that generous and comprehensive culture, from the roots of which the growth of your professional attainments may spring, and, tended by your earnest efforts, expand into the symmetrical and well-rounded whole characterizing the completely developed possibilities of the highest type of physicians of to-day.

"Whatever our success in broad fields of practical medicine—and in this we surely have good reason to be gratified—it must be admitted that we, as a profession, are lacking in much of that comprehensive scientific culture which is regarded as essential for the European physician. Few who have had the opportunity for unbiased observation will deny that this deficiency exists. The skilled performer on a musical instrument is not necessarily a musician; one may become a master of execution, a virtuoso in fact, and yet remain ignorant of the true science of his art; the gymnastics of the key-board may be acquired, yet thorough bass, counterpoint, and harmony, continue to be unsolved mysteries. Neither does the dexterity of the specialist, whether exhibited in a difficult resection, a brilliant ovariotomy, an accurate lens extraction, or a well-executed piece of bridgework, alone serve to raise the skilful operator to the highest plane of professional development; to reach this latter, which should be the goal of every graduate, in addition to and associated with his necessary dexterity, must be the comprehensive learning befitting the man of science."

In speaking of the desirability of adding a fourth year to the present three years medical course of the University of Pennsylvania, Prof. Piersol expresses the hope "that the opportunity will be embraced to give recognition to those biological studies now completely ignored, to an extent at least sufficient to broaden the basis of our teaching to a degree commensurate with the importance of the results to be attained: such additions, together with the development to desirable proportions of the fundamental studies already taught, and the extended practical work in the clinical branches, will fully consume the time gained from an increase of term. Simply to append an additional clinical year, without remodelling and strengthening our entire course, would be to augment the weight of a structure resting on foundations none too secure. Our system of medical education must form a pyramid in which the broad and stable base of the science leads up to the specialized skill of the art." But Prof. Piersol would not be satisfied with a purely scientific preliminary education for the medical student; he would like to see French, German, and Drawing, included in his matriculation curriculum; the two former for the rich store of information which a sufficient knowledge of them unlocks—the latter, not only on account of the convenience of proficiency therein, but on account of the habits of correct observation developed by the use of the pencil, and especially of that delicacy of co-ordination of the eye and the hand ensured thereby, which is of such infinite service to the medical man.

Dr. Piersol, and those who think with him on these educational matters, have our entire sympathy in their endeavor to elevate medical education in the United States.

KOCH'S DISCOVERY.

Dr. Robert Koch delivered an address before the International Medical Congress at Berlin, in which he mentioned a remedy which conferred on the animals experimented upon an immunity against inoculation with the tubercle bacillus, and which arrested tuberculous disease. Investigations have now been carried out on human patients, and these form the subject of a further communication, published in the *Deutsche Medicinische Wochenschrift*, of Nov. 14th. This article was transmitted by cable to the *Philadelphia Medical News*, and appeared in an extra edition of that enterprising journal on Nov. 15th. From the article thus published

in the *News* we gather that the research is still far from complete; and it is only because so many reports have reached the public in an exaggerated and distorted form that Prof. Koch has deemed it imperative to give a review of the position at the present stage of the inquiry, in order to prevent false impressions.

As regards the origin and preparation of the remedy no statement is made, as the research is not yet concluded, and this is reserved for a future communication. The remedy is a brownish, transparent liquid. Introduced into the stomach the remedy has no effect—it must be injected subcutaneously; the place chosen for the injection has been between the shoulder blades and in the lumbar region.

The healthy individual and patients suffering from diseases other than tuberculosis are unaffected by a dose of 0.01 cubic centimetre, whilst this quantity suffices to produce a severe general reaction, as well as a local one, if administered to a tuberculous patient. This circumstance makes the treatment of diagnostic value. The local reaction can be best observed in cases in which the tuberculous affection is visible; for instance, in cases of lupus. A few hours after injection into the skin of the back the lupus begins to swell and redden, and this it does generally before the initial rigor, which is a constant occurrence after the liquid is injected. During the fever which ensues, the swelling and redness increase, and may finally reach a high degree, so that the lupus tissue becomes brownish and necrotic in places where the growth was sharply defined. After the subsidence of the fever the lupus-tissue gradually decreases, and disappears in about two or three days. The lupus spots themselves are then covered by a soft deposit, which filters outwards and dries in the air. The growth then changes to a crust, which falls off after two or three weeks, and which, sometimes after one injection, leaves a clean red cicatrix behind. The reaction of the internal organs, especially of the lungs, in cases of pulmonary disease, is not at once apparent, unless the increased cough and expectoration of consumptive patients after the first injection be considered as pointing to a local reaction in these cases. The general reaction is dominant; nevertheless, one is justified in assuming that here, too, changes take place similar to those seen in lupus cases. The local reaction in cases of tuberculosis of the glands, bones, joints, etc., are perceptible to eye and touch. In these cases, swelling, increased sensibility, and redness of the superficial parts, are observed.

The remedy does not kill the tubercle bacilli, but the tuberculous tissue; it can influence living tuberculous tissue only, and has no effect upon dead tissue; as, for instance, necrotic cheesy masses, necrotic bones, etc; nor has it any effect on tissues made necrotic by the remedy itself. In such masses of dead tissue living tubercle bacilli may still be present, and are either thrown off with the necrosed, or may possibly enter the neighboring and still living tissue. If the remedy is to be rendered as fruitful as possible, this peculiarity in its mode of action must be carefully observed; everything must be done to remove the dead tissue as soon as possible; as, for instance, by surgical interference. Where this is impossible, and where the organism is unassisted in throwing off the tissue slowly, the endangered living tissue must be protected from fresh incursions of the parasites by continuous applications of the remedy.

POST-GRADUATE LECTURES IN THE MEDICAL FACULTY OF THE UNIVERSITY OF TORONTO.

We have to announce with much gratification that the Medical Faculty of the University of Toronto is making arrangements to give a course of lectures and demonstrations on medical and surgical subjects, chiefly for the benefit of general practitioners, in December—probably the last three days of the week before Christmas. Several distinguished men from the United States have promised to assist the members of the Faculty in this undertaking. Among these will probably be the following: Dr. Vaughan, of Ann Arbor; Dr. White, of the Pennsylvania Hospital; and Dr. Robinson, of New York. Dr. Graham has just returned from New York, where he went to complete arrangements, with others who are expected to be present. We are unable to give full particulars now, but we understand a programme will shortly be printed and sent to the members of the profession throughout Ontario, who will be invited to attend.

Among the subjects to be discussed will be

tubercle in its medico-surgical aspects; typhoid fever; some of the more common diseases of the skin; subluxations; and diseases of the genito-urinary organs. It is hoped that within a few days after the delivery of this issue of THE PRACTITIONER, a full and complete programme will be in the hands of the profession. The committee having the matter in charge has endeavored to choose subjects of great practical importance which will be of general interest to all physicians, and will endeavor to have them treated in both their scientific and practical aspects.

We may say that the idea of giving such a course originated in the mind of the Vice-Chancellor of the University, who has shown himself to be a very strong friend of higher education of all kinds, and has evinced a desire to make the re-established Medical Faculty a source of great benefit to both students and practitioners. We hope the friends of the faculty, and others (if there be any *others* in the province), will appreciate the efforts that are being made, and show by their presence their interest in the cause of medical education.

THE UNIVERSITY OF TORONTO AND THE KOCH CURE FOR TUBERCULOSIS.

As our readers will have learned through the secular press, Professor Ramsay Wright, through the generosity of Mr. Mulock, the Vice-Chancellor, has gone to Berlin to study Koch's methods of preparing and employing his new remedy for tuberculosis. The Medical Faculty readily gave the required leave of absence, although it happened that this distinguished lecturer could ill be spared during the regular work of the session. It was thought especially important, both in the interests of humanity and medicine, that a scientist should make a thorough investigation of the methods of preparation. The main consideration, as far as Canada is concerned, is to get, as soon as possible, a supply of the curative lymph, or as Dr. Koch proposes to call it—"parataloid." The Faculty is very anxious to be in a position to prepare the material in the University laboratories, and furnish it free of expense to the profession. Of course Professor Wright will not overlook the clinical aspect of the action of the lymph, but will observe very carefully the results of experiments in this direction. The magnificent generosity of Mr. Mulock will be gratefully appreciated by all classes throughout the country.

Meeting of Medical Societies.

TORONTO MEDICAL SOCIETY.

Oct. 23, 1890.

The president, Dr. Spencer, in the chair.

Dr. B. E. Mackenzie presented a specimen of

BONY ANCHYLOSIS AT THE HIP-JOINT.

This occurred in a patient ten years of age She had been admitted into the Children's Hospital, suffering from hip-joint disease, in 1886. Abscesses had formed at different times about the joint. She had one or two attacks of hæmaturia, accompanied by severe vomiting and purging, during which her vitality was very much lowered, and she became emaciated; she rallied, however, from time to time, and improvement was noted in her general condition. Early in October, '90, she became much worse and died in a few days. At the *post mortem* examination there was found amyloid disease of the kidneys and other internal organs; the kidneys were bound down by perinephric inflammation. The condition about the hip-joint was as follows: Inside the pelvis, on the left side, there had been inflammatory exudation, the lymph had organized, and there had been sinuses formed through this in various directions, one sinus passed through the ischium. Firm osseous anchylosis existed at the hip-joint. Dr. Mackenzie exhibited the joint; a longitudinal section had been made through the bones to show the condition of the parts.

Dr. B. E. Mackenzie exhibited a case of

HIP-JOINT DISEASE

in a child in whom a cure had been effected. The child has been under his treatment since June, '89. An American traction-splint had been worn until three months and a half ago. There is no defect at the present time except slight atrophy of the muscles; there is no shortening.

Dr. B. E. Mackenzie also showed a patient suffering from

ROTATO-LATERAL CURVATURE OF THE SPINE.

There has been much improvement under treatment; this is evidenced by the fact that he is one inch taller than at the end of July last; he is eleven years of age. The treatment has been by means of gymnastics; a girdle has been used which has been thrown around the patient's body, and one portion of it fixed to a hook in the wall of the room; the patient throws his weight upon this girdle in such a way as to correct the deformity.

Dr. Price Brown narrated the clinical history of a case of

SUB-ACUTE PNEUMONIA.

Dr. A. F. Mackenzie stated the case of a child who suffered from

APHASIA AFTER TYPHOID FEVER.

Patient æt. 12. At the end of the first week she was delirious; at the end of the second week she talked nonsense, making attempts to speak, but without pronouncing any words. After the third week the temperature was normal, but the patient had lost the power of speech. This continued for a week or ten days, and then she got back her entire vocabulary in the course of twenty-four hours.

Oct. 30, '90.

The president, Dr. Spencer, in the chair.

Dr. Machell read a paper on

APPENDICITIS, FOLLOWED BY PYLEPHLEBITIS,

which appears at page 537 of THE CANADIAN PRACTITIONER.

Dr. McPhedran stated that pylephlebitis was always chronic and ran a tedious course. He narrated a case caused by a suppurating gland at the junction of the ileum and the cæcum. The explanation of life being prolonged in such cases is probably the fact that the liver acts as a sentry; cases of pylephlebitis are most common in connection with cæcal abscesses. The abscesses in the liver on section, in Dr. Machell's cases, were probably in branches of the portal vein. We are too prone to consider cases presenting symptoms like the one under consideration as malarial; malaria is, in Dr. McPhedran's opinion, rare in Toronto.

Dr. J. E. Graham had seen well-marked cases of malarial fever, in Toronto, cured by quinine. The frequency of the chills, and the inefficacy of quinine, would have led one to suspect pyæmia. The temperature during the chill in pyæmia runs often to 104 or 105°.

Dr. Cameron thought the case was clearly one of pyæmia, and the abscesses should have been reached per rectum. Such cases do occur from suppurating piles, starting suppuration in the portal system. The change of type in the time of recurrence of the chills was against the theory of malaria.

Dr. Gullen and Dr. Nesbitt also took part in the discussion, and Dr. Machell replied.

Dr. Thos. Mackenzie exhibited a patient, an adult woman, suffering from

DISLOCATION OF THE HEAD OF THE RADIUS BACKWARDS AND OUTWARDS.

Six weeks ago she fell off the steps three feet to the ground, and sustained the injury. The arm was put up in the extended position—the arm is now stiff in that position. It is proposed now to put the patient under chloroform, and forcibly bend the arm.

Dr. Atherton, Dr. Primrose, Dr. Powell, Dr. B. E. Mackenzie, Dr. Doolittle, and Dr. Cameron discussed the case, and Dr. Mackenzie replied.

Nov. 13, '90.

Vice-president Dr. A. A. MacDonald in the chair.

Dr. Holford Walker presented the following specimens:

1. *Nodular myoma.* Removed from a patient who had suffered from very severe hemorrhage. Hysterectomy was performed.

2. *Œdematous myoma.* This was a large tumor, as large as an adult head; it had shrunken to one-quarter its original size since operation. There was no menorrhagia in this case, but the tumor was removed because of the pain and pressure. Under the microscope the tumor shows the structural elements of the uterine wall, but abnormally distributed. Hysterectomy was in this case also performed, and the patient made a good recovery.

Dr. Atherton asked if electricity had been given a fair trial, in the second case, to relieve the pain. Tait is now in favor of removing the

ovaries and tubes in cases of uterine myomata, both of the nodular and œdematous variety.

Dr. Walker is of opinion that electricity is useless in œdematous myomata. She had suffered pain for two years and a half, and operation was necessary.

Dr. J. F. W. Ross showed the following specimens:

1. *Sarcoma.* Two months before coming under Dr. Ross' care, the patient, a young woman, had been operated upon in the Toronto General Hospital. The cervix was at that time dilated, and what was apparently a small myoma was removed. After this something presented at the os, which puzzled one to tell whether it might be a myoma or an inverted uterus. Dr. Ross, after careful examination, concluded that it was a sarcomatous growth; there was a very fetid discharge, and the rapid recurrence pointed to malignancy. The tumor was removed through the vagina. The pedicle was at the fundus, and great difficulty was experienced in getting at it. The wire broke three times in attempting to remove it. An attempt was made to draw it down by means of midwifery forceps; finally the knife was used and the tumor cut into several pieces; a chain was then thrown around the pedicle, and the tumor was removed. The patient made a good recovery.

2. *Œdematous myoma* removed through the vagina. The patient was an elderly lady, who had suffered from menorrhagia for ten years; a very offensive odor simulated malignant disease.

3. *Myoma.* A small tumor was removed from a young lady who suffered from vaginal discharge, and symptoms of falling of the womb.

4. *Hemorrhagic polypus.* Removed from a young negress. This tumor was exhibited to contrast with the last specimen.

5. *Tumor connected with right rectus muscle.* Young woman; first noticed the tumor in May, '90; it was about the size of a tea-cup. She had received a blow on the abdomen, over the portion of the tumor, two years ago, one month after the birth of her last child. The tumor was on the right side of the abdomen, and was freely movable from the umbilicus down to the iliac crest. The diagnosis seemed to lie between solid ovarian tumor and tumor of the mesentery. On September 20th, '90, an operation was performed. On opening the abdomen the tumor was found adherent to the anterior abdominal wall, and evidently growing from the right rectus muscle. Cutting carefully between clamp forceps the tumor was separated, and it was found that it had no attachments within the peritoneum. The capsule was opened, and the tumor shelled out. The rectus muscle was laid bare in the process. What remained of the sheath of the rectus was stitched over the muscle, and an attempt made in this way to shut off the general peritoneal cavity.

Dr. A. A. MacDonald, Dr. Atherton, and Dr. Walker discussed the cases.

Dr. Cameron presented a

VESICAL CALCULUS,

removed from the bladder of an old gentleman, æt. 76. The bladder wall was, in this case, coated with mucus and phosphatic deposit. The patient had suffered from bladder trouble for many years; prostatic enlargement had been found by Sir Henry Thompson, who put the patient on catheter treatment. Eight or nine years ago he lost a broken-off portion of a catheter in the urethra. Dr. Cameron, by introducing the finger in the rectum, succeeded in working the broken piece of catheter forwards along the urethra, and removed it. Last spring the patient began to fail in health, and last July abandoned the use of the catheter, because the water was constantly coming away, and when the catheter was used, nothing was found in the bladder to draw off. On passing a sound a few days ago, a calculus was detected. Median lithotomy was performed; the patient has done well.

Dr. A. A. MacDonald stated that he once removed a stone, the nucleus of which was a piece of catheter.

Dr. Thomas Mackenzie asked if suprapubic operation would not have been indicated in such a case.

Dr. Cameron, in reply, stated that the suprapubic cystotomy was useful in some forms of prostatic enlargement. If there is an annular ring of the prostate around the urethral orifice, then the bladder should be opened above the pubes. If by subpubic cystotomy we find that the prostatic trouble cannot be overcome, then the suprapubic operation should subsequently be performed.

Hospital Reports.

SUPRA-PUBIC LITHOTOMY IN A CHILD.

Under the care of I. H. Cameron, M.B., in the Toronto Hospital for Sick Children.

F.B., æt. 3½ years, was admitted Sept. 27th, 1890, with the following history: Two years ago he began to suffer from frequency of micturition and pain during the act. He was placed under the care of a doctor, who administered medicine which relieved his symptoms considerably. Latterly, however, he has been suffering very much, and has not been able to play about without pain. For the past year he has strained at stool, and this has caused the bowel to come down. He wets the bed at night, and frequently wets his clothes during the day; there has never been any blood noticed in the urine. His general health has been good.

On admission to the hospital, it was noticed that the boy was fretful, and objected to be moved about; he preferred lying quiet and undisturbed. The urine was examined; specific gravity, 1012; faintly alkaline in reaction; contained a trace of albumen, numerous pus cells, no blood; there were some pavement epithelial cells, and a few round epithelial cells. Chloroform was administered, and, on sounding, a stone was detected, the surface of which was rough, and it was judged to be a little over half an inch in length. An operation was performed by Dr. Cameron on Oct. 3rd. Chloroform was administered; a soft catheter was passed, and the bladder washed out with warm boracic lotion. A little less than two ounces of warm lotion was now injected into the bladder, sufficient to make the bladder quite prominent and perceptible under the hand placed on the hypogastric region; the catheter was removed and a rubber band tied around the penis, in order to retain the fluid in the bladder. A sausage-shaped rubber bag was now introduced into the rectum, and an ounce and a half of warm boracic lotion was injected into it. A incision two inches long was made in the middle line just above the pubes; the incision was carried through the linea alba; the transversalis fascia divided on a director; the loose cellular tissue covering the bladder was pushed aside, and the bladder wall exposed. Whilst working with a director and knife, the bladder was inadvertently opened; the director was at once introduced into the opening; a silk suture was introduced through the wound, and made to penetrate the bladder wall, on the right side of the incision, from within outwards; this was carried through the abdominal wall, and the other end of the suture was carried through the same tissues a quarter of an inch lower down; this was drawn tight, leaving the two ends of the suture lying free on the abdominal wall, and a loop within the bladder. This procedure was repeated on the left side. The bladder was incised for three-quarters of an inch between the sutures, and the fore-finger was introduced into the bladder, the stone was detected, and was removed by the aid of a forceps. The bladder was now explored, but nothing further found; it was then thoroughly irrigated through the abdominal wound. The lateral sutures were tied, thus securing the apposition of the bladder to the anterior abdominal wall. A small-sized drainage-tube was passed down to the bladder wound, which was left patent, and was brought to the surface at the lower angle of the abdominal wound. Several points of interrupted suture were introduced in the wound in the abdominal wall. The surface of the wound and the inner aspect of the thighs were smeared with vaseline to prevent irritation from the urine, and a dressing of iodoform-gauze applied, the rubber band on the penis and the rectal bag having been removed. The prevesical fold of peritoneum was not brought into view during the operation.

The stone was ovoid in shape. It weighed 179 grains, and measured 1¼ inches in one diameter and ⅞ of an inch in the other; brown color and hard and roughened on the surface. At one extremity there was a whitish deposit.

Oct. 6. Patient has not had any pain since the operation. There has been slight abdominal distension, which is subsiding; the stitches were removed to-day; urine passes freely by the wound.

Oct. 12. Catheter passed to-day and a small quantity of urine drawn off. Up to this date he has passed water entirely by the wound; in future the catheter is to be used every eight hours.

Oct. 14. Eczematous condition of scrotum

and penis, with considerable inflammation. Catheter had to be discontinued. Zinc ointment applied.

Oct. 28. Passed water voluntarily by the urethra without use of the catheter, which has been discarded since last note.

Oct. 29. He passes all the urine by the urethra, and none by the abdominal wound. The eczematous condition has disappeared.

Nov. 11. The wound is healed perfectly, ane patient now runs about without pain or discomfort of any kind. He is no longer fretful, but is bright and cheery.

Pathology.

INOCULATION WITH TUBERCLE VIRUS THROUGH A WOUND.—An extremely interesting case of tubercule inoculation has been reported lately in the *Dtsch. Med. Wochenschr.* The facts are as follows: A four months old infant of a phthisical mother fell and cut its scalp upon a vessel used by the mother as a sputum receiver. The wounds were smeared with the sputa, which were shown to contain the bacil'i of tuberculosis. The dressing of the wounds was done by iodoform-collodium and sublimate gauze, after washing with bichloride solution. The wounds healed nicely at first, but soon after ulcers appeared in the cicatrices, these being followed by caseation and suppuration of the cervicle glands. Tubercle bacilli were found in the pus. Operations were undertaken for the extirpation of the glands, but the infant died. At the *post mortem* examination tubercles were found in the spleen only. Evidently the reporter considers that death resulted from general tuberculosis originating in inoculation of a skin wound. If this be so, then Payne's statement that the only known instances of tubercle inoculation through wounds are those in which so-called tubercular warts have been produced on the hands of those making *post mortem* examinations can no longer stand. —J. C.

It is said that about two thousand physicians have gone to Berlin to study the mysteries of Koch's parataloid. Many of those who would liked to have gone, but have been unable to do so, are inclined to be both cynical and sceptical.

Correspondence.

Editor of THE CANADIAN PRACTITIONER:

DEAR SIR,—I regret very much that, in the opening lecture delivered at the commencement of the present session, I overlooked the name of Dr. Julius Mickle, in connection with the diploma of membership of the Royal College of Physicians. Dr. Mickle graduated at Toronto University in 1866, as Gold Medalist, and passed the examination for membership in 1879. He was elected a Fellow in the following year.

The admission does not affect my argument, as Dr. Mickle was thirteen years a graduate before he became a candidate for the membership of the Royal College of Physicians.

Yours very truly,

J. E. GRAHAM.

Book Notices.

Transactions of the Michigan State Medical Society for the Year 1890.

The twenty-ninth annual meeting was held June 19th and 20th, at Grand Rapids. This volume, the fourteenth published, contains a report of the address of the President, Dr. Geo. E. Frothingham, of Detroit, and the various papers read, with the discussions thereon.

The Medical News Visiting List for 1891. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data, and 176 pages of blanks. The 60 patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, pocket, pencil, rubber, erasable tablet, etc. Leather, $1.25. Philadelphia: Lea Brothers & Co., 1890.

The *Medical News'* Visiting List for 1891 has been thoroughly revised and brought up to date in every respect. The text portion contains most useful data for the physician and surgeon, including an alphabetical Table of Diseases, with Remedies; also sections on Examination of Urine, Artificial Respiration, Incompatibles, Poisons and Antidotes, etc. The classified blanks are arranged to hold records of all kinds of professional work, with memoranda and accounts.

Annual of the Universal Medical Sciences. A yearly report of the progress of the general sanitary sciences throughout the world. Edited by Charles E. Sajous, M.D., and seventy associate editors, etc. Vol. II. F. A. Davis, publisher, Philadelphia, New York, Chicago, Atlanta, and London.

Among the contents of this volume are Nervous and Mental Diseases; Diseases of the Brain and Spinal Cord; Diseases of the Blood and Spleen; Diseases of the Uterus, Ovaries and Tubes, Vagina, and External Genitals; Diseases of Pregnancy; Obstetrics; Puerperal Diseases; Dietetics of Infancy and Childhood, etc. Among the authors are Drs. Goodell, Parish, Parvin, Jaggard, Manton, Starr, Minot, Munde, etc. The volume is a very excellent one in every respect.

Book Reviews.

A Manual of Modern Surgery for the use of students and practitioners. By John B. Roberts, A.M., M.D., Professor of Surgery in the Woman's Medical College of Pennsylvania; Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Lecturer in Anatomy in the University of Pennsylvania. Octavo, 780 pages, 501 illustrations. Philadelphia: Lea Bros. & Co.

This is an excellent text-book of surgery, suitable alike for the student and the practitioner. It is thoroughly up to date, and contains clear and concise accounts of all the more recent advances in surgery. Each subject is dealt with in a truly scientific spirit; the pathology of the condition is fully discussed before any particular line of treatment is indicated. The diagrams are excellent, and the book is profusely illustrated. We heartily recommend the book to those in search of a text-book of modern surgery.

Dust and its Dangers. By T. Mitchell Prudden, M.D. New York and London: G. P. Putnam's Sons.

This small book of 104 pages deals with a subject which demands the serious consideration of every individual. The fact that dust-laden air is the medium through which disease is so frequently carried from one person to another is well established. There are many, however, who have but a hazy notion of the way in which infection is thus carried, and who are still further in the dark as to the proper method of preventing the spread of disease through this medium. This book will prove of undoubted value to the class referred to, and will be found most interesting as well as instructive.

Ointments and Oleates, especially in Diseases of the Skin. By John B. Shoemaker, A.M., M.D., Professor of Materia Medica in the Medico-Chirurgical College of Philadelphia, etc. Second edition revised and enlarged. Philadelphia and London: F. A. Davis, 1890.

This is the second edition of a useful work. Dr. Shoemaker, as an indefatigable worker in the department of pharmacology and therapeutics, is well-known. The book gives the author's opinions, formed on extensive investigations and a large experience. The source of the various ointments and oleates is in each case stated; numerous formulæ are given, and the indications for their use are pointed out. This book forms one of the "physicians' and students' ready reference series," published in neat form by Mr. F. A. Davis, of Philadelphia.

Dental Surgery, including Special Anatomy and Pathology. By Henry Sewill, M.R.C.S., L.D.S., Eng.; Past President of the Odontological Society of Great Britain, etc. Third edition, 400 pages. London: Bailliere, Tindall & Cox, 1890.

This book deals with the more modern methods of practising dental surgery. The matter is presented to the reader in a clear and concise manner, and it must be looked upon as an excellent manual for students and practitioners. The drawings are well executed; the neat binding, and clear print on good paper, make a peculiarly attractive volume.

A Text-book of Comparative Physiology. For Students and Practitioners of Comparative (veterinary) Medicine. By Wesley Mills, M.A., M.D., D.V.S., Professor of Physiology of McGill University, Montreal, etc. 627 pages, 476 illustrations. New York: Appleton & Co., 1890.

This work will prove of undoubted value to the student of veterinary medicine; it supplies a want which has been felt more particularly of late years, when great advances have been made in this department of medical science. It has been no easy task for the student who wishes to

perfect his knowledge to apply the principles laid down in text-books of human physiology to the diversity of structure and function which he has to study in the lower animals. Professor Mills, in his text-book, has undertaken the task, and in a most satisfactory manner has placed in the hands of the veterinary student a work which will meet with the appreciation it undoubtedly deserves.

Irregularities of the Teeth, and their Treatment. By Eugene S. Talbot, M.D., D.D.S., Professor of Dental Surgery in the Woman's Medical College, Chicago, etc. Second edition, revised and enlarged. 257 pages, 234 illustrations. Philadelphia: P. Blackiston, Son & Co.

The author of this book devotes a great deal of the space at his disposal to the study of the etiology of the irregularities met with in the human teeth. This undoubtedly paves the way for a rational treatment. The various methods of correcting irregularities are explained with great care and clearness, and many ingenious forms of apparatus described. The work is well illustrated, and in every respect a more satisfactory exposition of the subject could not be desired. The publishers are to be congratulated on producing an attractive volume.

Annual of the Universal Medical Sciences. Edited by Chas. E. Sajous, M.D., and seventy associate editors. Volume IV., 1890. F. A. Davis, Philadelphia.

The fourth volume of this popular work contains the following articles: Diseases of the Skin and Syphilis, by Arthur Van Harlinger; Opthalmology, by Chas. A. Oliver and Geo. M. Gould; Otology, by Charles S. Turnbull and Arthur Ames Bliss; Diseases of the Nose and Accessory Cavities, by Chas. E. Sajous; Diseases of the Pharynx, Tonsils, and Hard Palate, by D. Bryson Delavan; Diseases of the Larynx, Trachea, and Œsophagus, by J. Sallis-Cohen; Intubation of the Larynx, by E. Fletcher Ingals; Diseases of the Thyroid Gland, by Franklin H. Hooper and J. Payson Clark; Inebriety, Morphinism, and Kindred Diseases, by W. R. Birdsall; Legal Medicine, by Frank Winthrop Draper; Urinalysis, by Allen J. Smith; Bacteriology by Harold C. Ernst; and Epidemiology, by John B. Hamilton.

Pamphlets Received.

The Effects of Dry Atmosphere on Chronic Inflammation of the Larnyx and Nares. By E. Fletcher Ingals, A.M., M.D., Professor of Laryngology, Rush Medical College; Professor of Diseases of the Throat and Chest, Woman's Medical College, etc. Reprinted from *The Journal of the American Medical Association*, October 11th, 1890.

Pernicious Anæmia, with a report of five cases. By A. McPhedran, M.B., Lecturer on Clinical Medicine in the University of Toronto. From *The Medical News*, October 11th, 1890.

Pamphlets and Reprints.

Should Hypnotism have a Recognized Place in Ordinary Therapeutics? By Norman Kerr, M.D., F.R.S., London, England. Publisher: H. K. Lewis.

Description of the Series of Tests for the Detection of Color-Blindness: Designed for Use in Railway Service. By Charles A. Oliver, of Philadelphia.

Electricity in Gynæcological Practice. By Herman E. Hayd, M.D., M.R.C.S. Eng., Buffalo, N.Y.

Reprint from the Buffalo *Medical and Surgical Journal*, May, 1890.

Importance of Œdema of the Vaginal Portion of the Cervix Uteri as a Symptom of Chronic Disease. By Andrew F. Currier, M.D., New York.

Reprint from Gynæcological Transactions, vol. xiv., 1889.

Personal.

DR. JAMES KERR, formerly of Winnipeg, is now practising in Washington, D.C. He has lately been appointed Chief of the Surgical Clinic of the Central Dispensary and Emergency Hospital of that city. He also holds positions on the staffs of the Woman's Hospital and Garfield Hospital.

DRS. GEORGE ROSS and RICHARD MACDONNELL, of Montreal, have gone to Berlin to study the Koch methods.

DR. CARSON, of Toronto, was in London, England, about the first of last month, on his way to France. He had been in Edinburgh and consulted Drs. Fraser and Bramwell, who gave him good encouragement. He expects to spend the winter on the shores of the Mediterranean.

DR. GEORGE A. PETERS, of Toronto, has passed the final examination for the Fellowship of the Royal College of Surgeons of England. We believe that Dr. Peters is the only surgeon in Ontario who has this qualification.

DR. H. P. LOOMIS, on behalf of the Medical School of the University of New York, and Dr. Lindley, on behalf of the Post-Graduate Medical School, have also gone to see Dr. Koch.

DR. ROBINSON, of New York, will deliver two lectures in the Post-Graduate course of the Medical Faculty of the University of Toronto, on "The Significance of the Condition Called Eczema—Catarrhal Dermatitis." He will also deliver a lecture to the Pathological Society in the Biological building on "Psorospermosis Follicularis Vegetante" (Darier); and a lecture to the Toronto Medical Society on "The Treatment of Malignant Cutaneous Epitheliomata."

DR. WHITE, of the Pennsylvania Hospital, Philadelphia, will probably deliver a lecture in the University Post-Graduate course on "The Present Aspect of Antiseptic Surgery." It will be a reply to Mr. Lawson Tait's recent criticism of Lister and his methods.

SINCE writing the notice of Toronto University course of lectures, we have learned from Dr. Graham that Dr. Robert Abbe, of New York, will deliver two or three lectures on the following subjects: (1.) "The Limitations of Spinal Surgery." (2.) "Mastoid Pæymia—Jugular Thrombosis—Ballance's Operation." (3.) "Technique of Intestinal Anastomosis."

DR. JAMES D. THORBURN, son of Dr. James Thorburn, of Toronto, started for Berlin, Nov. 27th, as the representative of the Toronto University Medical Society. It is expected that he will study in conjunction with Professor Ramsay Wright, and at the same time will consider especially the clinical aspect of the question.

DRS. SYLVESTER AND WARDLAW, of Galt, have entered into partnership for the practise of their profession; and Dr. Sylvester is now spending some time in New York at the Polyclinic, taking up especially gynæcology and general surgery.

DR. J. R. LOGAN, of Grand Forks, N.D., visited Toronto a few days ago.

BEFORE General Middleton left Canada, he stated in a letter addressed "To the People of Canada" that he had recommended the following promotions for surgeons on duty in the Northwest rebellion:

To Receive the C.M.G.—Dr. Sullivan; Dr. Roddick.

To be Brigade Surgeons.—Dr. Sullivan; Dr. Roddick.

To be Surgeons-Major, with Rank of Lieut.-Colonel.—Dr. Orton; Dr. Gravely; Dr. Bell; Dr. Strange; Dr. Pennefather; Dr. Ryerson; Dr. Codd.

To be Surgeons.—Dr. Whiteford; Dr. Grant, G.G.F.G.

Births, Marriages, and Deaths.

MARRIAGES.

SMITH—BROWNLEE.—On Sept. 23rd, J. C. Smith, M.D., of Thompson, North Dakota, to Lillie Brownlee, of Kemptville, Ont.

DEATHS.

ANDREWS.—At Toronto, on Nov. 5th, Lavinia Eunice, wife of Dr. R. I. Andrews.

Miscellaneous.

In our issue of September 16th, one of our book reviews contained a reference to *Wood's Library*, for July, 1890. As this may mislead our readers, we beg to state that the publication of *Wood's Library* was discontinued at the end of 1887. The recent series of publications is entitled, *Wood's Medical and Surgical Monograph.*

It was announced that the chair of the Principles and Practice of Medicine at Michigan University had been filled by the election of Dr. William C. Dabney of the University of Virginia, but later advices say that Dr. Dabney declined the chair on account of his health.

THE

CANADIAN PRACTITIONER

FORMERLY "THE CANADIAN JOURNAL OF MEDICAL SCIENCE."

EDITOR:
A. H. WRIGHT, B.A., M.D. Tor., M.R.C.S. England.

Business Management, · · THE J. E. BRYANT COMPANY [illegible]

TORONTO, DECEMBER 16, 1890.

Original Communications.

PRELIMINARY SCIENTIFIC MEDICAL EDUCATION IN SWITZERLAND.

BY PROF. K. RAMSAY WRIGHT.

During the summer I had my attention called to a paper by Prof. Herzen, the distinguished physiologist of Lausanne, on the above subject, which affords an excellent picture of the present regulations in Switzerland in regard thereto, and permits what must be always instructive for us—a comparison of these with our own.

Before 1886 the State examination in medicine was divided into a primary and final, very much after the fashion of the Council examinations here. The primary included physics, chemistry, botany, zoology (with comparative anatomy), anatomy (with histology), and physiology, together with practical examinations in chemistry, anatomy, and histology. No regulations existed as to the period of the students' course at which this examination should be passed; the student might present himself as soon as he had all the necessary tickets. Many, therefore, tried at the end of their third semester (*i.e.*, after two winter sessions and one summer session), but most did so at the end of the fourth semester (*i.e.*, after the second summer session). In both cases, however, there was the temptation to the raw student to plunge into the more advanced work of the primary at once, before he was ripe for it, because he had to present two winter semester tickets in practical anatomy. These involved some twenty-four hours work per week during the winter, so that the student might be well prepared in that subject, but obviously had no time for anything else.

The neglect of the fundamental studies on which anatomy and physiology rest, had such a prejudicial effect on the education of the students that the various Swiss medical faculties were requested by the State to suggest a remedy. The remedy proposed was the subdivision of the primary into a physico-natural and an antomico-physiological part, with the proviso that the first should be passed before the second.

This had the effect that the energies of the student, during the first two semesters, could be concentrated entirely upon physiology, chemistry, botany, zoology, and the associated practical courses which, in accordance with the spirit of the times, have to supplement the didactic teaching, while the next three semesters could be devoted entirely to anatomy, physiology, and histology. The temptation to plunge into practical anatomy in the first year was in this way removed, for the student who did so endangered his chance of passing the first division of the primary at the end of his second semester. Thus, in a medical course of five years (ten semesters), half of the time would be devoted to the primary, and half to the final, subjects (pathology and therapeutics, and the various professional branches).

This subdivision of the medical course met with various objections some who agreed that

it might be desirable to increase the term of study to ten semesters instead of eight, would nevertheless have preferred that the proportion allotted to the primary and final subjects should be four to six, or even three to seven, instead of five to five. Prof. Herzen, however, very properly points out that if any attempt is to be made to put the student *au courant* of the *present* position of these primary studies in relation to the science and art of medicine, and especially if they are to be employed for developing the scientific spirit and for training in scientific method, then, in view of the enormous progress of these sciences within the last twenty years, five semesters are certainly not too long to devote to them entirely.

Some other objectors desire to see the medical course unloaded of the elements of the physico-natural sciences—suggesting that only the applications of these to medical science should be treated of during the course. This obviously involves that the gymnasia (high schools and collegiate institutes) should be able to give sufficient instruction in them, and that the medical matriculation examination should cover these. At present the standing of *bachelier es lettres* from the gymnasia is all that is required for beginning the study of medicine, but already some institutions, such as we have at Neuchatel, have begun to offer an additional year's course in science, which would be quite equivalent to the work covered in the first part of the primary.

Prof. Herzen thinks that an extension of such collegiate courses to other secondary schools, accepting of equivalents with any reduction of medical courses to four years, quite feasible.

An examination of the time-table proposed by Prof. Herzen is suggestive :

1st year, both semesters—

Zoology and Compar. Anat.	M.	F.	at 8
Botany	"	"	" 9
Physics	"	"	" 10
Chemistry	"	"	" 11

Three afternoons a week for practical chemistry, one for physics throughout the year, and one for zoology in winter, and for botany in summer.

Three following semesters :

Histology	3 times a week,	at 9
Anatomy	6 " "	" 10
Physiology	6 "	" 11
Repetitions	3	9

Winter afternoons to be devoted to practical anatomy, and those of the summer semester to histology, embryology, and physiology.

The following seem the most salient points in the above which invite a comparison with our arrangements :

1. Simplicity of time-table. 2. Deferring practical anatomy till second winter session. 3. Deferring materia-medica till after the primary. 4. The question of demanding more science in the matriculation examination.

SIMPLE OR PERFORATING ULCER OF THE DUODENUM.*

BY A. M'PHEDRAN, M.B.,

Lecturer on Clinical Medicine in the University of Toronto.

Comparatively little is said in most medical works on ulceration of the duodenum, many of them making no reference to it. This is doubtless due to the fact that the clinical phenomena so closely resemble those of gastric ulcer that many cases of duodenal ulcer are mistaken for the former disease. And then in autopsies, I fear, that only too frequently examination of the duodenum is neglected, so that doubtless not a few cases escape notice. According to the classical researches of Brunton, in about five per cent. of all autopsies, evidences of gastric ulceration are to be found; we are much less able to speak definitely on the frequency of duodenal ulceration, but many estimate its frequency at a ratio of about one to thirty of the stomach cases.

The first case of duodenal ulcer was recorded in 1828, by Robert of France, whose description of the symptoms is quite as clear as any that have been written in more modern times. Up to 1881, one hundred and twenty-three authors are given in the Index Catalogue of the Library of the Surgeon-General's Office of the United States. And since then, perhaps, half as many have been recorded. Some of these are doubtless not genuine, and many are cases of acute ulceration following burns, so that the undoubted cases on record do not, probably, much exceed one hundred. It is not to be forgotten in estimating the frequency of this affection, however, that many accurately observed cases have not been placed on record.

Read before the Toronto Medical Society, Nov. 15th, 1887.

The relationship of age and sex is in curious contrast to that in the gastric affection; for while in the latter, young females are the chief sufferers, in duodenal ulceration, on the contrary, the majority of those affected are males, between thirty and forty. In Krauss' collection of sixty-four cases, only six were females. The disease has been met with in the new-born infant,* but it is rare in early life. As the ulcers in the two situations seem to be identical in pathology this difference is strange, and, at present, inexplicable.

Such constitutional conditions as erysipelas, septicæmia, albuminoid degeneration, diseases of heart and lungs, alcoholic excesses are given as associated with duodenal ulcer; they seem to have no influence in the causation of the same disease in the stomach.

A large proportion of the cases of duodenal ulcer reported have been in apparently exceptionally healthy men, living in healthy environments, and whose nourishment has been ample.

These ulcers occur in the first portion of the duodenum; the other two parts are affected no oftener probably than any other part of the small intestine. Physiologically the portion of the duodenum above the orifice of the bile duct is a part of the ventricular cavity, as its contents are identical with those of the stomach, the acid chyme not being altered until it meets with the bile and pancreatic fluid. This fact, together with the similarity of simple ulcers in the stomach and duodenum, leaves little room for doubt that both owe their origin to a common cause. As to the pathogenesis of these simple ulcers little advance has been made on the views originally expressed by Virchow and others, viz., that there was first, arrest of blood-supply to a portion of mucous membrane; then, secondly, solution or digestion of this ischæmic membrane by the gastric juice, hence the designation "peptic ulcer." The arrest of blood-supply may be due to such causes as embolism, thrombosis, extravasation of blood from trauma, degeneration of arterial walls, etc. Some believe that abrasion of the mucous surface by a hard indigestible substance may originate an ulcer, and that such cause would be more likely to be effective in the duodenum on account of its narrow lumen and fixed position. If this be so, it offers some explanation possibly for the more frequent occurrence of duodenal ulcer in males, and at a more advanced age than obtains in the gastric affection.

I should state that I have not included ulcers occurring in cases of burns in this description. They are acute in formation and may cicatrize quite rapidly; cicatrization has been known to be complete in a month. It is uncertain how long it takes the simple peptic ulcer of the duodenum to cicatrize; the time probably varies, as it does in gastric cases, from a few months to several years. With cicatrization complete, the sufferer is not wholly free from danger, as such untoward results as stricture of the gut, obstruction of the hepatic or pancreatic ducts, the portal vein or hepatic artery, are possibilities to be borne in mind.

The clinical history varies greatly in different cases. Even in those with the most marked symptoms it is at least questionable if we can give more than a very probable diagnosis, as there will always be an element of doubt. The phenomena on which Bucquoy, Johnston, and others, have laid most emphasis are: 1. Sudden intestinal hemorrhage in an apparently healthy person, tending to recur. With or preceding this there may be hæmatemesis, if the bleeding has been sudden and free, so as to regurgitate into the stomach. 2. Pain in the right hypochondriac region, occurring late after meals—two to four hours. 3. Gastric crises of extreme violence and without reference to food. Hemorrhage is apt to occur at the time of these crises.

Of these symptoms the intestinal hemorrhage is considered the most important. Occurring in the absence of such common lesions as hæmorrhoids, dysentery, malignant and tubercular disease, and the hemorrhagic diathesis, duodenal ulceration, it is said, may be recognized by this one symptom alone. Yet fatal intestinal hemorrhage has occurred without any of these causes, and no ulcer been found in the stomach or duodenum.

The occurrence of pain after meals is not present in nearly all the cases; not probably in more than half of them, if in so many even. Its cause is usually referred to the passage of the chyme through the duodenum, in which case the pain should begin within half-an-hour after the meal, *i. e.*, as soon as the chyme begins to pass, unless it be due, as some believe, to the greater acidity of the latter part of the chyme.

*American Journal of Medical Science, Vol. II., 1[illegible].

Several cases are reported during the last few years in which there were no symptoms present until perforation occurred, with peritonitis, followed by death in a few hours. This specimen, presented by Dr. Wilberforce Aikins, is one of this kind. It is from a man apparently in good health, who was seized during the night with sudden extreme pain in the abdomen, diffused all over it. He died next day. At the autopsy this large oval ulcer was found in the anterior wall of the pyloric orifice. Such cases are probably not rarely mistaken for strangulation of the bowel, but the rapidity with which collapse sets in should nearly always serve to distinguish them from strangulation, in which collapse develops more gradually. In perforation of the duodenum the opening is nearly always found in the anterior or upper walls; when the ulcer is in the lower wall, adhesion to the pancreas usually prevents perforation into the peritoneal cavity.

In like manner many cases of gastric ulcer are met with, in which there are no symptoms until perforation occurs. This appears to be especially true of ulcers situated in the lesser curvature, where they seem to be removed, to a certain extent, from irritation by the chyme.

It should not be forgotten that in some cases of duodenal as well as of gastric ulcer, so much thickening takes place about the base of the ulcer as to give rise to evidences of tumor, thus strongly simulating malignant disease.

The following are cited as probable cases of duodenal ulcer. They serve to illustrate the uncertainty that must surround their diagnosis, and the difficulty of distinguishing them from the gastric affection:

Case 1. Mr. W., æt. 25, a teacher from the western part of the Province, had suffered more or less from dyspepsia for several years, with so-called bilious attacks at times. He consulted me in March, 1889, for pain and discomfort in the right epigastric region, coming on from half to an hour after meals. His digestion was poor and he was in miserable health. During February and March he had, on two occasions passed a moderate amount of blood by the bowel. These was no evidence of rectal disease to account for it. There had been no vomiting. There was nothing more than general discomfort to pressure in the epigastric region; no localized tenderness or induration. I heard from him a month later that there had been no return of hemorrhage but that he was not improving. I have not heard of him since. In this case the symptoms are chiefly referable to the stomach, whose functions, in any case, were very imperfectly performed. The pain may have been either stomachic or duodenal, or both; the hemorrhage was most probably from the duodenum; but there is room for reasonable doubt even on this point.

Case 2. Mr. X., æt. 30, a book-keeper; had lived rather a fast life. Had been healthy till the autumn of 1889, when he began to suffer from pain and distress beginning about fifteen to thirty minutes after meals and lasting an hour or two. At times the pain would be extreme; it was referred to the region of, and above, the umbilicus. His appetite and digestion continued fairly good. On Dec. 12th, 1889, while walking along the street he suddenly became faint, fell down, and vomited some dark brownish fluid, which some one, who extended to him a friendly hand, said looked like catsup. He was taken home and two hours later had a free liquid motion which he did not see. He had another motion at once on returning to his room—this time he used the chamber vessel and saw that the stool was dark liquid blood and very copious. Smaller motions continued to pass for the next three days. He was unconscious for nearly a week. He was taken to the General Hospital where he remained till February, by which time he was able to walk about, though still weak and very pale. His stomach gave him no trouble and he had considerable appetite.

April 14th, 1890. He consulted me for a return of pain in epigastric and umbilical regions; it began about half an hour after meals and lasted a variable time: he had no vomit nor melæna; the tongue was clean; bowels tended to be constipated; the pallor was very marked; he was given bismuth, codeine, and hydrocyanic acid, to soothe the stomach and relieve pain; diet, liquid in small quantities at short intervals. He improved satisfactorily though it was difficult to induce him to persevere long enough to ensure cicatrization of any ulceration that might exist. He is now quite well.

The occurrence of pain so soon after food points strongly to gastric ulcer while its seat, the umbilical region, indicates no special seat of lesion. The hemorrhage, from the sudden profuseness of the intestinal part of it, while little was vomited, indicates the duodenum as its probable, if not its only possible, source. Had it escaped from a gastric ulcer, the stomach would have been distended with blood and more would have been vomited, while its evacuation from the bowel would not have taken place so quickly or in such profusion. Of course it is quite possible that ulceration may have occurred in both stomach and duodenum; in that case the pain was due to the lesion in the former, and the bleeding arose from the erosion of some blood vessel in the latter.

Case 3. Miss Y., æt. 30. Had always been healthy with good appetite and digestion. Her mother and one sister died of phthisis; another sister has had two extremely severe attacks of gastric ulcer. The past summer was spent on the Island where bathing was freely indulged in, but never long enough to cause depression. She was well till about the middle of August, when, in common with others in the household, she had considerable diarrhœa; not certain of the character of the stools, but they were probably dark. It was noticed that she looked more pale and unwell than the diarrhœa would account for; still her appetite was fair, but there was some flatulence. On Sept. 2nd she vomited some dark grumous material. Thought the motions were dark. Sept. 3rd, a similar vomit, and passed a copious motion of blackish fluid; she felt very faint and was extremely pale; not feeling any discomfort from food, she ate heartily of ordinary diet; after dinner she vomited about a pint of dark fluid, mostly blood. For some days the motions contained much blood. The loss had been so great that she was not able to raise her head from the pillow. Never having been ill she was reluctant to have advice, but submitted when she felt herself become so weak. She had no pain or tenderness; the hemorrhage was the only phenomenon. She was kept quietly in bed, given sedatives for the stomach, and given liquid diet; her improvement has been uninterrupted and she seems now as well as ever.

From the increasing pallor and almost certain dark character of the stools, it is very probable that she was passing blood daily during the diarrhœa she had before her condition became alarming. This with the later very free evacuation of blood by the bowel would indicate the duodenum as the seat of lesion. In that case the hæmatemesis occured only when the bleeding became so free that the blood regurgitated into the stomach.

Case 4. The following case which I had the privilege of seeing with Drs. Wm. Woodruff and H. A. Macallum, of London, in December, 1889, finds appropriate reference here though it was not one of simple ulcer.

Mr. Z., æt. 40, an architect, had always enjoyed good health until 1887, after which he began to complain of indifferent ailments. In Sept., 1888, he began to pass large dark stools every few weeks and his strength failed somewhat. In February, 1889, he passed a very copious black stool followed by extreme faintness. Dr. Woodruff saw him and attributed his condition to the loss of blood. The stools were black for several days. He improved and returned to his professional work in a few days. Continuing to pass dark stools at varying intervals, in May he consulted my colleague, Dr. J. E. Graham, who attributed the symptoms to ulceration of the duodenum, possibly malignant in nature. Shortly afterwards he saw two of the most eminent physicians of New York, who diagnosed gall stones, and advised rest at the seaside. This advice he followed, and he returned home after a few weeks greatly improved. But the black stools recurred again; still he was able to persevere with his work till the end of November, three weeks before I saw him. By that time he had several dark stools daily, and often vomited grumous blood also. Dr. A. B. Macallum, of the University of Toronto, had found glandular crypts from the pyloric end of the stomach in the evacuations, leaving no room for doubt as to a destructive lesion. He was very prostrate, pallid, with a lemon tint. Dr. H. A. Macallum found the blood to present the changes indicative of pernicious anæmia. There was tenderness, with well-defined thickening, in the region of the first portion of the duodenum. Percussion note was dull. Food, especially solid, caused pain and uneasiness. Pulse, 140; temperature, 100°. Death occurred a few days

after; no autopsy. Though the condition here was doubtless malignant disease of the duodenum and stomach there is little doubt but that the disease began in the former with ulceration of its mucous surface; the hemorrhage from the bowel left little room for doubt as to there being such ulceration.

Few will be inclined to dispute Wilson Fox's opinion that the symptoms of duodenal ulcer differ but little from those which are met with, when the disease occurs in the stomach. (*Reynolds' Syst. of Med.*)

Pain is much oftener absent in the duodenal disease, owing, some believe, to this part of the canal being more fixed, and subject, therefore, to less movement than the stomach. When present, as already remarked, it is often extremely severe, making the patient writhe while it lasts; it may occur at irregular intervals without reference to food, as *e.g.*, at night; or, if due to food, it is said to begin from two to four hours after the meal, but may, doubtless, occur as early as half an hour. The occurrence of such pain in the right hypochondrium, in absence of other symptoms, is considered sufficient by some to establish a diagnosis of duodenal ulcer.

As to the significance of hemorrhage in the absence of causes in the lower bowel, sudden profuse discharge indicates strongly the duodenum as the seat of bleeding, as do also repeated small bleedings; in the latter case the blood is all tarry. In gastric hemorrhage, if small, the blood passed by the bowel will probably be found more altered by the action of the gastric fluid, and if large the vomiting will be more prominent than the alvine evacuations; while the converse probably holds true when the bleeding is duodenal.

SANITATION IN ST. JOHN'S, NEWFOUNDLAND.

BY ALAN MACDOUGALL,

Member Canadian Society Civil Engineers.

Built on a steep hillside on an almost solid rock foundation, which fortunately prevented the construction of privy pits, the sanitary question in the City of St. John's, N.F., presents a problem not met with in Canada. The city was devastated by fire in 1846, the population, fisher folk, too poor to put up expensive buildings, and without building material of a solid nature, had to use wood. The population has grown gradually till it is now estimated at thirty thousand. The town site, or more properly hillside, is intersected by a number of water courses, twelve or fourteen in all, which have gradually become sewers emptying into the harbor, after the manner of the Toronto sewers. No system of sewerage was considered till last year, when a thorough plan was elaborated, submitted to, and endorsed, by Mr. Rudolf Hering, of New York.

The Government of the colony has from time to time constructed a number of sewers, more as storm water drains than as sewers. It also controlled the city government until two years ago, when a municipal council was elected, who have considerable powers, but not such as city councils in Canada enjoy. During its control, it had to look after the cleaning and sanitation of the city; need it be said that so long as it was a "government" institution it could not be effectively performed; and when it was contracted for, the latter condition was worse.

The city has an abundant supply of beautiful pure lake water supplied by gravitation, which is furnished to the poorer parts of the city through public fountains. These houses cannot afford to have water put into them, even if they had sewerage in the streets. The water supply is assured, and the system of going to the public fountains has worked, and continues to work, well. The night soil and garbage has to be collected. It is a very fortunate circumstance they have never had privy pits, or the condition of the town would be something terrible. It is admitted by everybody that before the existence of the municipal council, the streets were very badly kept, and were often shockingly dirty.

The cross streets, and those on which the poorer classes dwell, are very steep; it is almost impossible for a horse to draw half a ton up some of them; narrow lanes, and crooked paths through which a cart can hardly pass, makes scavenging very difficult A contractor would naturally take the wide and easy streets.

Under the municipal council the system is different, and to the writer's mind is the most perfect he has experienced. The whole outfit belongs to the Council. There are fourteen

tightly closed night soil carts, and fourteen open garbage carts, which are worked by fourteen horses. The carts start out at midnight to collect night soil, which is left on the street in iron pails an hour or so before, they complete the collection in about three hours and a half; the horses are fed and go out about five o'clock to collect garbage, finishing about eight o'clock; after another rest they go out to collect the street sweepings, and get back to stables about mid-day. The force is worked to its full power all the time, and horses and plant have no rest. The writer testified with the greatest pleasure to the extraordinary cleanliness of these lanes and by-ways, and of the city generally. No refuse lies about; the empty tin, the ragged coat, old bed sacks, and other abominations of civilized life, are not found; and above all things, the smell of the privy pit is absent.

Collection and cartage of night soil and garbage at night is the desideratum of civil organization; it is exceedingly offensive to everybody's feelings to pass carts of garbage, and worse still, night soil, during the day. The city of St. John's, in a quiet unobtrusive way, has now for two years carried on this work, creating a perfect transformation where formerly the sights on the streets were very offensive, and more than the sense of sight offended. The work of collection is by no means easy; the grades on the cross streets are very great, the majority of them rise from 1 foot in 8 to 1 foot in 4; the streets are not laid out as in Canadian towns in nice square blocks, they run at all angles and end in *culs de sacs*. The carts have to travel over the same ground more often, and make detours to get at points which would be readily reached on a Canadian street.

The refuse matter is carted into the country by three different roads, the city being divided into divisions to suit, and dumped on the land. The night soil is first put out, on it a few hours later the garbage is thrown, and later still all street sweepings. This covers the night soil fairly well, the farmers frequently add peat bog to it, thus forming a valuable compost; they are glad to have this refuse put on their lands for the sake of the rich manure, which costs them nothing: for stable manure they pay fifty cents per load.

The work has been satisfactorily carried on so far, no complaints have been received from any of the neighbors, nor has the public health been endangered. During the hot season the refuse is dumped on lands at a distance from the public roads and houses.

The manure is found to be very valuable, and is sought after by farmers and market gardeners in the neighborhood of the city; it forms a good manure for cabbages, large quantities of which are grown round the city.

The department costs about $17,000 per annum; and it is cheap when its efficiency and the health of the community are considered.

The Board of Health is a Government body, possessing the powers of our Provincial Board; the chairman of the municipal council has a seat upon it; its powers extend over the island. It has been in existence for some years, but it was only in July of last year (1889), that special duties were laid upon it with reference to the city of St. John's. A serious outbreak of diphtheria occurred which had to be checked by a strong hand; the arrangements in existence were inadequate, proper disinfection and quarantine could not be effected. On the top of a high hill, at the entrance to the harbor, stand the old barracks and hospitals of the Imperial Government, disused for the past twenty years and going to decay. They have been used at various periods for hospital and quarantine when the city was visited by cases of smallpox; these were put into good order, and constitute the present quarantine station. The hospital is by itself, on a lower level, about 300 feet above the sea, and a quarter of a mile from the other buildings, which stand on the top of the hill, about 250 feet higher. Here in the old barracks, there is a Lazaretto, or convalescent house, and the home where the other members of an infected family are kept during the period of probation—if no disease appears they are sent home. These houses are enclosed in separate yards, preventing any contact or communication between the inmates.

There is a good supply of excellent water from wells sunk deep into the rock. The two houses are washed down with disinfectant and lime wash every fortnight; clothes are steeped in a bichloride of mercury solution of 1 in 2000 for three hours, and then washed in a 1 in 3000 solution.

Fumigation of clothing has hitherto been done by surphur. A steam fumigator made in Nottingham, Eng., is being erected.

At the hospital, the wards are large, high, well lighted, and admirably adapted for the purpose.

Fumigation of houses and disinfection of clothing, etc., where cases occur is done by the Board, sulphur process being used; steam will be used when the fumigator is erected. It is intended to send all articles requiring fumigation to the hospital where the steam fumigating chamber is being erected. Houses are placarded and watched by a special constable.

CASES OF OVARIOTOMY.

BY KENNETH N. FENWICK, A.M., M.D.

Prof. Obstetrics and Gynæcology, Royal College, and Women's Medical College, Kingston.

Since my last published case of this operation I have had a number of others which may present some points of interest to the profession. Ovariotomy is an operation where dexterity is only gained by experience; where so many complications may arise that the patience, presence of mind, and courage of the operator, are put to the test, and justice demands that only those should attempt it who have facilities and experience, and not merely from the desire to gratify personal ambition.

In all the cases ether was used as the anæsthetic, except in No. 10, where chloroform was preferred.

Antisepsis was carried out very carefully in all, and in every case of recovery, union of the abdominal wound took place by first intention without a drop of pus, except in No. 7 and No. 2, and in both of these the cause was traced to carelessness in the preparation of the antiseptic solution of bichloride. In every case the abdominal wound was closed by the continuous catgut ligature, beginning at the peritoneum, then sheath of rectus, and finally skin; a method which I am satisfied is infinitely better than the interrupted suture, and which I first saw done by Dr. Thomas, of New York. In all the cases the pedicle was tied with silk, which was cut short and dropped. A drainage tube was not employed in any of the successful cases, although I am inclined to use in suitable cases simply a strip of antiseptic gauze, as I saw a year ago used by Dr. Hame, of Berlin, and in Albert's clinic, at Vienna.

Case 1. Mrs. J. S., æt. 44. Has had one child. For over a year noticed a tumor beginning on left side. At time of operating the tumor was the size of a seventh month pregnancy. Having been properly prepared, the usual incision was made three inches long, the cyst tapped with an ordinary trocar, and the clear fluid removed. The cyst was found to be multilocular, so after removing sufficient fluid to draw the sac out through incision, and being free from adhesions, the pedicle was tied and dropped; the abdominal wound closed by continuous suture, and moist bichloride gauze, absorbent cotton, and bandage. Her recovery was rapid, no elevation of temperature, and she left for home in two weeks.

Case 2. Miss Sarah N., æt. 27. A little over a year ago she had cystitis and a great deal of pain in right iliac region. On examining her I found the right ovary enlarged and cystic, about the size of fist, and as the symptoms were all evidently due to this, advised its removal.

On opening the abdomen the left ovary was found also to be cystic, and it first came in sight at the wound. In trying to remove it the cyst burst, so its pedicle was tied and the tumor removed. The right ovarian cyst, which was tougher, was removed entire, the pedicle tied and dropped, and the peritoneal cavity thoroughly sponged out. She made a rapid recovery with no elevation of temperature, but considerable pain, which I thought was largely due to her nervous temperament. The abdominal wound took three weeks to heal, owing to some defect in the preparation of the bichloride solution. The pain and cystitis have quite subsided since.

Case 3. Miss M. J. W., æt. 30. About three years before the operation she took a severe pain in her right side after a long walk, and a few months after this she noticed some abdominal enlargement, but could not remember exactly when it began. Some months after this she was tapped and eighteen pints of fluid removed. She was subsequently, at intervals of six months, twice tapped again, the fluid being highly albuminous and containing choles

terine. A few months after this she returned, and I determined to try and remove it.

On opening the abdomen the cyst appeared to be divided into two parts by a fibrous partition running obliquely across it, but as it was so firmly adherent to the anterior and lateral wall of the abdomen, I decided not to risk completing the operation, so I closed the wound, and in two weeks she was up and around again. The cyst was afterwards tapped in two places, above and below the site of the partitions, when a large quantity of thick oily amber-colored liquid was got from one cyst, and three quarts of thin greenish fluid from the other.

Case 4. Mrs. E. O., æt. 46. Three years ago first noticed a tumor in right iliac region. On examination I felt a hard tumor about the size of a child's head, with some fluctuation. It had every appearance of being fibro-cystic, especially as the cavity of uterus was abnormally deep, and menorrhagia was marked. Dr. McLean, of Michigan, who examined it with me at this time, also agreed with its being fibro-cystic, and advised letting it alone; the subsequent history only shows how impossible it is to be quite sure of the nature until the abdomen is opened. Some months after this, the tumor becoming very large and troublesome and fluctuation everywhere present, I decided to operate. Some slight adhesions to the omentum were found, and after evacuating the cyst the tumor was found to be a fibro-cystic of ovary with large hydrosalpynx. The tying of the pedicle was, therefore, a matter of difficulty. She did fairly well until the third day after operation, when, the pulse beginning to fail, she sank and died. On *post mortem* examination found the ligature had slipped and allowed some oozing, which, although very little blood was found, no doubt this, added to the shock of the operation, caused the fatal result.

Case 5. Mrs. C., æt. 55; never had any children. Two years before the operation noticed abdominal enlargement. On examination I diagnosed an ovarian cyst, and on using a fine aspirator found it to contain colloid matter. She had had an attack of peritonitis a few weeks before, but as she had so much discomfort she urgently desired some relief, and preferred to run the risks, which she was told were greatly against success. On coming down to the cyst found recent adhesions in every direction, which broke down easily, and firm adhesions which had to be tied and cut. When the pedicle had been tied and cut, and the cyst removed, having previously emptied out enough colloid matter to remove it, the bowels were glued together so as to remain above and leave the cavity occupied before by the cyst. The wound was then closed, but she only survived the shock about an hour.

Case 6. Mrs. J. C., æt. 32; has had no children. About two years ago noticed abdominal enlargement. The operation was very simple: the fluid was clear and watery; no adhesions; the pedicle, which was small, was tied and dropped; the entire operation being completed in twenty-five minutes. Recovery was rapid and complete.

Case 7. Mrs. N., æt. 35; has had several children. Suffered for years from ovarian dysmenorrhœa, and as every remedy failed I advised removal of ovaries. On opening the abdomen found uterus and ovaries firmly bound down by fibrous bands of adhesions, and so matted that it was impossible to bring up the ovaries, so, for fear of serious consequences, abandoned their removal and closed the wound. She recovered in ten days without any trouble except some pus in the abdominal wound, which took three weeks to completely heal.

Case 8. Mrs. J. D., æt. 34. Never had any children. Three or four years ago she noticed abdominal enlargement, and on admission to the hospital she was prepared for operation. As soon as abdomen was opened the cyst wall was noticed to be unusually vascular. A large amount of a greenish fluid was removed by trocar, and on draining out the cyst, which was free from any adhesions, it was found to be a fibro-cystic attached to fundus of uterus; so in order to remove it, either the uterus and ovaries had to come away and the pedicle treated by extra-peritoneal metnod, or the sac could have been stitched to abdominal wound and drained. The latter is the way it ought to have been done, but instead I stitched up the opening in cyst with catgut and dropped it, and closed the abdominal wound. She recovered quickly without any bad symptoms, but I have had to tap her since through abdominal wall.

Case 9. Ann B., æt. 32, a prostitute and

masturbator, who has suffered for years from abdominal pains. I advised removal of tubes and ovaries, which was done in usual way. Recovery rapid and complete.

Case 10. Mrs. F., æt. 35. Never had any children. Has had an abdominal tumor for thirteen years. On opening the abdomen and inserting a trocar into cyst a thin sebaceous matter came away with difficulty. A dermoid cyst was at once diagnosed, and the opening was enlarged with a knife until the hand could be inserted, when the contents, which consisted of sebaceous matter, hair, and bones, were scooped out. The cyst was multilocular, and after breaking through partition the other cysts were emptied in the same way. Several adhesions between cyst and abdominal wall were broken down with the hand, while two firmer bands were tied and cut. The abdominal wound had to be enlarged to fully six inches to remove the remainder of cyst. The pedicle, which was broad, was tied in sections and dropped. The abdomen was washed out with hot weak bichloride solution, thoroughly sponged out and the abdominal wound closed. There was hardly any shock, and recovery was rapid and complete. The operation just lasted sixty-five minutes, and the tumor must have weighed altogether about 35 lbs.

Selections.

CASE OF EXTENSIVE INJURY OF THE LEFT FRONTAL LOBE FROM A WOUND.

BY THOMAS ELISHMAN, M.B. AND C.M., BRECHIN.

W. C., 20 years of age, farm servant, was on Wednesday, 12th May, 1887, engaged scaring rooks by firing at them with an old gun. During his dinner-hour he went out to have a shot behind the house. His mother heard the report of the gun, and as he did not return as expected to his dinner, she went out to look for him. She found him lying insensible on his back in a pool of blood, about one hundred yards distant. He had evidently discharged his gun while resting it on the top of the wall, with the result that it had burst, the breech being blown out. The fragment had been hurled upwards and backwards, and had struck the lad on his left temple, knocking him over. His friends at once conveyed him to the house and sent for me. When I arrived, about an hour after the accident, I found him lying in bed in a semi-conscious state, breathing stertorously, and incapable of speech. The pulse was very weak and irregular, and he was in a very collapsed condition, partly due to shock, partly to hemorrhage, which had been very considerable. His face was much engrained with powder, principally on the left side. The pupil of the right eye responded to light. The left eyeball was completely destroyed, having evidently been struck by part of the breech. In the middle of the margin of the upper left eyelid a small piece of tissue was punched out, about the size of a millet seed. Slight hemorrhage from the left nostril and mouth was observable. The principal wound was a cavity in the frontal bone, extending upwards from the middle of the left supra-orbital ridge for a distance of two inches, transversely at the upper margin one and a half inches, at the lower margin nearly one inch. The superficial wound appeared to be smaller than that in the frontal bone, the tissues being very much torn and lacerated. The fracture in its outline was very irregular. No fragments of bone could be detected until the finger was inserted into the wound, when a small piece about the size of a shilling was felt embedded in the brain substance. This was found to be slightly adherent to the dura mater, and had to be twisted off with dressing-forceps. It proved on examination to be concave and smooth on its inner surface, and was evidently a portion of the inner table of the frontal bone. Several other small spiculæ were also found and removed without any difficulty. On inserting the finger deeply into the wound, while searching for bone fragments, violent vomiting was set up, which resulted in the ejection from the stomach of a large quantity of greenish offensive fluid, preceded by a little blood. The brain substance was much injured.

The wound was thoroughly washed out with a weak solution of carbolic acid, and dressed with pads of boracic lint, lightly secured with a bandage. Cold water cloths, to be frequently renewed, were ordered to be applied to the head. Perfect quiet was ordered, and a little fluid nourishment to be given at intervals. Towards evening he rallied a little and passed a fairly quiet night. Next morning, when visited, his

pulse was found better than on the previous day, being stronger and more regular. The dressings had become adherent to the wound from oozing of blood, and were removed with some difficulty. The wound was washed out antiseptically, and carbolic oil on lint was used for the next dressing. The brain substance was now seen protruding through the broken table of the skull and pulsating strongly.

For the first week the patient remained in much the same condition, the wound suppurating and discharging freely. Though he uttered words he could not speak intelligibly. He seemed to feel little or no pain, except when the wound was dressed. Generally he lay in a drowsy state, from which at times it was difficult to rouse him. His bowels were obstinately confined, and castor oil had to be given to obtain relief. During this period the rise in temperature and pulse was slight. He was fed on milk food and beef tea.

About the beginning of the second week the stupor became deeper. The temperature and pulse gradually rose. Towards the middle of the week there was difficulty in swallowing, and involuntary passage of urine and fæces. He seemed at the same time to be in a most uneasy condition, groaning and rolling his head about. At other times he seemed to obtain temporary relief from lying on his face with his head pressed down into the pillow. On being asked a question, he would mutter some words, but no information could be derived from what he said.

The discharge from the wound now became very offensive, and the protruding mass of brain substance began to change color, becoming first brown, gradually shading into black. Charcoal poultices were applied, when a slough began to separate from the brain substance, and was then easily removed in pieces. The largest piece was about the size of a shilling, and about an eighth of an inch at its thickest part, thin at the edges. As the surface of the wound became clean and healthy, the urgent symptoms gradually passed off, leaving the patient at the end of May in a very weak and exhausted condition. The carbolic dressings were again used, the wound showing signs of cicatrization from its edges. The injured eye had entirely disappeared, and the resulting cavity had much the appearance seen after enucleation of the eyeball.

About this time he would use profane language whenever the wounds were touched, or when he was annoyed in any way. In contrast to this, when he improved and was able to be out of bed, he spent much time in reading the Bible. His memory began to return, and he commenced to speak intelligibly, although it was difficult for him to concentrate his thoughts on any subject for even a few minutes. His recollection of events up to the time of the accident was perfect, but everything after that for a period of about three weeks was a complete blank. He continued gradually to improve, and gained strength both mentally and physically till the end of June, when he was able to be out of bed. Red lotion was applied to the wound, as the process of healing was slow, and about the beginning of August the wound had closed. During July he suffered much from toothache on the left side, but would not permit the decayed tooth to be extracted. The sight of the right eye was much impaired for near objects, though distant ones were fairly well seen. He was so nervous that he would not suffer an examination to be made through the opthalmoscope. Iodide of potassium was given in small doses, under which his sight seemed to improve, but his obstinate dislike to taking medicines was such that the remedy was not persevered with.

From this time till the end of the year, on three different occasions, pieces of dead bone worked their way out at the cicatrix, varying from less than half to an inch in length, of a white ivory-like appearance. On all of these occasions there was much pain and discharge, which continued for some days after their removal, accompanied with febrile disturbance. The wound always closed up shortly afterwards. The glands of the neck were enlarged and painful. The appearance of the cicatrix in the spring of 1888 was that of a marked depression over the cavity in the frontal bone, covered in with a thin, whitish, semi-transparent membrane, which moved with the pulsations of the brain.

For the last eighteen months the patient has been working off and on in the fields at light employment. He takes his food fairly well, but is very thin. His intelligence, as far as can be ascertained, was never very highly developed before the accident, and has certainly not been improved thereby. He is very irritable, and the

least annoyance brings on a fit of violent passion, which leaves him weak and nervous. His memory is very defective. Severe headaches trouble him periodically—so much so that he has to remain in bed for a day or two at a time. He is afraid of going out at night in the dark alone; and unless someone is with him to guide him, is in danger of falling. At times he is very secretive and will hardly speak. Lately he has complained of pain and slight loss of power in his right hand. His sight is steadily becoming worse. When he reads, his face is almost touching the book. Owing to his having removed with his parents from the immediate neighborhood, he has not been seen by me for some time; but his latest symptoms were described to me by his mother, whom I chanced to meet some weeks ago. The continuance and increase of symptoms up to the present time seem to indicate that some retrogressive lesion is extending into the brain substance.—*Edinburgh Medical Journal.*

UNIVERSITY OF PENNSYLVANIA HOSPITAL.

Service of Dr. J. WILLIAM WHITE.

I. EMPYEMA OF THE ANTRUM SIMULATING SOLID GROWTH.

Mrs. P., æt. 59, white, was sent to the hospital by her physician for the purpose of having her left superior maxillary bone removed for a tumor of that structure. The patient gave the following history: About a year previous to admission she received a blow upon her left cheek. She had a tooth extracted about this time, a portion of the root of which remained. Three months subsequently she noticed that her left cheek was swollen, and an acrid, offensive secretion appeared in the mouth. The enlargement increased, and the discharge into the mouth continued. She suffered very little pain.

On examination, the left cheek was seen to be very prominent, and the hard palate depressed. The skin was not involved. The appearance was that of a non-malignant solid growth, *e. g.*, osteoma or chondroma. Although the enlargement closely simulated tumor, it is a matter of experience that a collection of pus in the antrum may give rise to this condition. Dr. White, therefore, decided to make an exploratory puncture before taking any steps toward the removal of the superior maxilla. A trocar was accordingly forced through the anterior wall of the antrum, and its withdrawal was followed by the discharge of a considerable collection of pus. The opening was enlarged with bone forceps, and the cavity washed with a saturated solution of boric acid. It is very fortunate for the patient that excision of the upper jaw was not needed, as she has mitral and aortic heart disease, and contracted kidneys, so that it is improbable that so grave an operation could have been performed without serious consequences resulting.

Abscess of the antrum may result from a carious tooth, traumatism, caries of its walls, and a catarrhal inflammation of the lining membrane, becoming purulent after obstruction of the orifice, etc. Sometimes the diagnosis can be made by the discharge of pus through the nostril of the affected side. Often, however, the use of an exploratory trocar, as in this case, is necessary.

The after-treatment consisted of the free use of the boric acid lotion several times daily. The patient left the hospital in a week, the discharge having entirely ceased, and the prominence in the cheek rapidly subsiding.

II. HYPOSPADIAS.

Arthur J., æt. 7, a victim of this malformation, was brought to the hospital for operation. The hypospadias was of the peno-scrotal variety, and the penis was united to the scrotum throughout its entire length. Duplay's method was employed, and the first operation consisted in freeing the penis from its attachment to the scrotum, and the free transverse division of the band which united the glans to the hypospadic orifice. This allowed the complete straightening of the penis, and it was then bandaged against the pubis to maintain this position. In a few days the patient was allowed to go home, as it is inadvisable to perform the next step in the operation until a satisfactory result of the first has been assured.

In a few months he presented himself again, and as the organ had remained perfectly straight, the second part of the operation, that of forming an urethra, was done. This is effected by tunneling through the glans with a trochar in the proper position; a flexible catheter is then passed through this opening, and along the under sur-

face of the penis in the normal position of the urethra. An incision through the skin is now made a few millimetres on either side of the catheter, and flaps raised in both directions. Those next the catheter need be but small, so as to partially encircle the latter, the outer flaps being more freely dissected to enable them to meet over the catheter. These flaps, thus made, were brought together and retained by modified button sutures. Union was obtained for one-half the length of the penis, and a third operation, similar to the last, resulted in establishing a perfect urethra. It then remained to close the hypospadic orifice, and to render the urethra continuous from bladder to meatus. This is the third step in the method. It is done by carefully freshening the edges; a catheter is then introduced into the bladder, and flaps raised, as in the second proceeding. In this case the catheter was allowed to remain three days. The result was excellent, and the patient left the hospital with a patulous urethra extending from the glans penis backward.—A. C. WOOD, M.D. —*University Medical Magazine.*

HANDS OFF.—Dr. Geikie and his colleagues in Trinity Medical School, and their sympathizers in the sectarian universities of this province are quite sore over the fact that the Provincial University has re-established her medical faculty and is engaged in the work of medical education. The worthy Dean of Trinity pretends that he and his sympathizers are instigated to this opposition out of regard for the public good. The real reason is that they fear opposition, and that they dread a more scientific system of teaching the healing art, and that a lot of them are consumed with sectarian prejudice. To all these gentlemen connected with rival or sectarian institutions we say Hands Off the University of the people of Ontario. When the people of this province as a people object to their university extending its usefulness and widening the service it renders to the public it will be time for the legislature to curb the spirit of progress lately shown in the Queen's Park; until then the rivals and the sectarians had better speak for themselves as rivals and sectarians, and not for the people. There is one thing the people of Ontario ought to remember: that the legislature of this province is supreme in educational affairs, and that it is the fountain of university powers. Yet these sectarian universities have the ungracious trick of obtaining powers and favors from the Provincial Legislature, and then turning about and combining against the Provincial University and crying down the public system of education. Some of them even deny the power of the Province to amend their "royal charters." Queen's goes to Ottawa for an amendment of her powers, and Trinity bases her pretensions to open a degree-conferring establishment in Great Britain on a royal charter issued by the home authorities. But when it comes to attacking the Provincial University they work in the Legislature, and if they seek to get a hand in the control of public education they work on the Minister of Education, who is a politician first and therefore they think open to sectarian pressure. All these sectarian establishments would like to secure provincial aid; they would, if they could, close up the people's university and apportion it out amongst themselves. But they take good care, as Mr. Blake said, to keep out of the provincial audit. They would like to cripple the Provincial University, to interfere with public education so as to benefit themselves, to obtain, if possible, a provincial grant, but they on their part object very strongly to the province having a word to say in their management or their policy, or to inspect their accounts. The Provincial University, on the contrary, has never interfered with them or their rights; she has chosen to go on in her own way and to endeavor to serve the people of Ontario, and to advance our noble system of state education. Let Dr. Geikie and his colleagues go on in their work, improve their school and their methods, and let them leave to the people of the province, who have faith in the provincial educational institutions, the business of their management. By their conduct in the establishment of schools of their own they have declared a want of confidence in the state institutions; it is not for them, prejudiced as they admit themselves to be, to advise what is in the best interest of our great system of public education, completed as it is by a great and expanding public university. They ought to have all they can do in running their own establishments.—*The Toronto World.*

THE
Canadian Practitioner
A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, DECEMBER 16, 1890.

FORCIBLE DILATATION OF THE CERVIX UTERI.

Many are the minor surgical operations produced by modern gynæcology. Not the least important among them is that which is known as "forcible dilatation of the cervix." We have always looked upon it as one of the most barbarous procedures known to surgery, and were much pleased to notice in the November number of *Buffalo Medical and Surgical Journal* some remarks on the subject by Dr. Joseph Price, of Philadelphia.

Dr. Price read a paper befere the Philadelphia County Medical Society on the subject of "Certain Causes of Major Pelvic Troubles Traceable to Minor Gynæcology," in which he made comments on Emmet's cervical operation, forcible dilatation, inconsiderate use of the uterine sound, and intra-uterine applications. He admits that a certain measure of success may follow a forcible dilatation of the cervix in some cases of dysmenorrhœa due to stenosis of the cervical canal, but he considers that the procedure involves very great dangers. He says: "Rapid dilatation of the cervix is a distinct traumatism, and along with it run all the dangers incident to septic absorption that attend any other violent procedure, and where traumatism, incident to natural causes, is confessed to be the cause of so much subsequent mischief, it ought not to be expected that operative injury can be harmless. This conclusion, reached inferentially, has been abundantly confirmed on the operating table by much of my later pelvic work. In a number of cases with a history of preceding dilatation, the after-operation has exhibited an inflammatory condition of affairs as complicated as any other in my experience. Some of the dilatations were done with pre-existing disease, which was made worse by this interference, whilst others were done simply to relieve the dysmenorrhœa, and resulted in the establishment of a complicated surgical disease in which operation was necessary purely to save life. All in all, I believe that, judged simply by its remote effects, the operation of rapid dilatation is a dangerous one, and results oftener in subsequent harm than in lasting good."

The dangers connected with the operation are thus described by Dr. Price in a very concise and rather graphic manner. The words of warning from such a prodigious worker, such a careful worker, and so brilliant a gynæcologist, are worthy of careful consideration; and we feel that we are justified in giving them considerable prominence, together with our hearty endorsation

APOLLINARIS WATER.

Apollinaris water is a pure mineral water, its chief virtue consisting in the fact that it contains a very large proportion of carbonic acid gas. The spring from which it is obtained is situated on the bank of the river Ahr, near the village of Nuanahr, in Germany. It was discovered accidentally in the year 1851, from the fact that vines would not flourish on a particular spot because carbonic acid gas issued from the ground. On the advice of Professor Bischop, of Rome, who was consulted, a well was sunk, and at a depth of forty feet a spring was reached, which rose to the surface with tremendous force. The volume of carbonic acid gas expelled with the water is so great that it is dangerous to approach the spring on a windless day. In 1873 an English company purchased the property, and have since that time distributed this celebrated water to all parts of the world. A correspondent of *The London Times* gives some interesting statistics which show that the supply is abundant, and the methods of bottling and distributing are complete. Last year about sixteen millions of bottles were exported. About seven hundred tons of straw, for packing, and fifty-seven tons of corks were used in the same year. They fill the bottles at the rate of ninety thousand a day, and four hundred and fifty persons are engaged in the works. Careful tests show that the pre-

sent well can supply sufficient water to fill forty million quart bottles yearly. When the demand grows beyond these limits the company may have to sink a second well.

NOTES.

A HOSPITAL CENSURED BY A CORONER'S JURY.—A patient, with alcoholic delirium, committed suicide, last month, in the Long Island College Hospital of Brooklyn. She was confined in a private room, with hands and feet manacled, and was tied to the bed. She managed to get rid of her fastenings, and jumped out of a window, which was not barred. The verdict of the coroner's jury contained the statement that "the authorities of the hospital are responsible, for being negligent in not providing the proper care to prevent the said patient from taking her own life." The profession and the public will probably agree with the verdict. It is very difficult, and often impossible, to treat such patients outside; but when they are taken into a hospital, they should not be allowed to throw themselves out of windows.

Pathology.

BACILLI OF ENTERIC FEVER IN URINE.—Recently Karlinski, (*Prag. Med. Wochenscr.*), undertook a research with regard to the occurrence of the specific germ of enteric fever in the urine of patients suffering from that disease. His observations were made upon the urine of thirty-eight living patients, and microscopic examination was had also of the kidneys of six patients who had succumbed to the fever. In twenty-one out of the forty-four cases the result of the search for bacilli was positive, and in these twenty-one albumen was present in the urine. When albuminuria was transient, bacilli were, as a rule, absent. Sometimes the bacilli show themselves much earlier in the urine than in the fæces—on the third day in the urine, but never before the ninth in the fæces. On these grounds K. thinks the examination of the urine of value as a means of diagnosis. The process of urine examination also is much simpler than in the case of fæces. Some experiments of the observer showed that the increase of the typhoid bacilli in albuminous urine is irregular, certainly, but always occurs, and more freely at 39° C. than 32° C. In two enteric typhoid cases the bacilli died in the urine, which was albuminous, in five days at 36° C.—J.C.

PUS FORMATION. Kapper (*Wien. Medicin. Presse*) has recently reported a case of abscess formation, in which micrococcus tetragonus was the only microbe to be found in the pus. Accordingly he considers it as the cause. Whilst this form has long been known, and particularly as an inhabitant of lung cavities, it has been treated as an accidental occurrence in these cases. It will apparently have to be added to the list of pyogenic microbes.—J.C.

Book Reviews.

A Dictionary of Practical Medicine. By various writers. Edited by James Kingston Fowler, M.A., M.D., F.R.C.P., Senior Assistant Physician to the Middlesex Hospital, etc. Philadelphia: P. Blackiston, Son & Co.

This work gives an account of important subjects comprised under the head of practical medicine, including also the diseases peculiar to women. The editor and contributors in their description of the various diseases, and treatment of the same, have aimed at practical utility rather than completeness of detail. Surgical subjects, as a rule, have been excluded, but in some of the articles dealing with the diseases of women certain details of surgical procedures have been given. The work resembles Quain's Dictionary of Medicine, which is very well known in this country. As Dr. Fowler's dictionary is fully up to the mark in every respect, and quite abreast of the times, we believe it will be found an exceedingly valuable and interesting book for the general practitioner.

Cyclopædia of the Diseases of Children, Medical and Surgical. The articles written especially for the work by American, British, and Canadian authors. Edited by John M. Keating, M.D., Vol. IV. Philadelphia: J. B. Lippincott Company.

The contents of the volume include one chapter on Diseases of the Ear, three chapters on Diseases of the Eye, seven chapters on Hygiene, and twenty-eight chapters on Diseases

of the Nervous System. Some of the monographs on subjects connected with hygiene are especially interesting. Among these are one on physical development, by John M. Keating; one on School-Hygiene, by Dr. D. F. Lincoln; one on Juvenile Crime and Public Methods of Prevention and Reclamation, by Dr. J. Percy Keating; and one on Medico-Legal Testimony by Dr. Jerome Walker. The chapters on Diseases of the Nervous System occupy the greater portion of the volume, and are all that could be desired in that important subject. Among the authors are the following: Dr. Allen McLane Hamilton, Langdon Carter Gray, A. Jacobi, Abner Post, J. J. Putnam, Mary Putnam Jacobi, Charles L. Dana, P. S. Conner, Charles B. Nancredi, James Stewart, E. C. Séguin, etc. This volume is fully equal to the admirable ones that have before appeared.

Personal.

DR. J. H. RICHARDSON, of Toronto, presented some specimens of the beautiful rifle bird to the Biological Museum of the University of Toronto.

DR. C. MCLELLAN, of Trenton, also presented some admirably mounted specimens of the Canada goose and pin-tailed duck.

DR. P. H. BRYCE, of the Provincial Board of Health, delivered a lecture on "Underground Waters as a Source of Public Supplies," before the Engineering Society of the School of Practical Science, December 2nd.

DURING Professor Ramsay Wright's absence in Germany his classes in the University of Toronto will be conducted by Dr. A. B. Macallum, Mr. E. C. Jeffrey, B.A., and Mr. J. J. McKenzie. Dr. Macallum will, however, do the lion's share of the extra work.

DR. W. H. ELLIS delivered an address on "The Chemistry of Photography," before the University Natural Science Association, Dec. 2nd.

DR. J. W. MCLAUGHLIN, ex-M.P.P., Bowmanville, was married December 3rd, to Miss Wilkinson, of Rosedale, Toronto.

Births, Marriages, and Deaths.

MARRIAGES.

ACHESON–PHYMISTER.—On December 3rd, George Acheson, M.A., M.B., of Toronto, to Louie, second daughter of Mr. James Phymister, Montreal.

DEATHS.

SUTHERLAND.—At his late residence, Oakville, on Sunday, 30th November, Thomas J. Sutherland, M.D., in his 53rd year.

WATSON.—On Sunday, Nov. 23rd, at Euclid ave., Frederic Sidney, youngest son of Dr. A. D. Watson, aged 1 year and 5 months.

Miscellaneous.

A SIMPLE METHOD OF REMOVING A NEEDLE.—I think it may be of service to record a simple means by which I obtained the removal of a broken needle from the heel of a young girl, aged 12, whom I saw lately walking about on her toes to avoid her right heel, into which a needle had been broken, touching the ground. The buried end could be felt, but any pressure led to its further entry. I directed her to wear a large thick corn-plaster around the spot, with a little wet cotton-wool in the centre, and to tread freely on the heel. Within a week afterwards she showed me the needle, which had protruded, and she had easily withdrawn it. Thus no wound was made, and no scar left to be a tender spot on the plantar surface—CHAS. STEELE, M.D., F.R.C.S., in *Brit. Med. Jour.*

Dr. Bergmann, of Berlin, in a recent clinic, stated that the Koch method, apart from its curative virtues, would be an important aid in diagnosis. In illustration he reported a case of tumor of the larynx, where it was doubtful whether the affection was tubercular or cancerous. As the treatment produced no constitutional reaction, Professor Bergmann concluded that the tumor was cancerous.

FANCY DISEASES.—"Diseases is very various," says Mrs. Partington. "Now old Mrs. Hayze has got two buckles on her lungs, and Mary Simmes is dying of hermitage of the lungs. One person has tonsors of the throat and another finds himself in a jocular vein. New names and new nostrils everywhere!"

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